GUITAR PRE-AMPLIFIER WITH EFFECTS

DG-Stomp

SERVICE MANUAL



■ CONTENTS

ECO-PULP
エコパルプ

CONTAINS SOYOIL

This document is printed on chlorine free (ECF) paper with soy ink.

YAMAHA
HAMAMATSU, JAPAN

GA 011537
20001001-39800

1.57K-786 I.T Printed in Japan 2000.09

IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING : Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT : This presentation or sale of this manual to any individual or firm does not constitute authorization certification, recognition of any applicable technical capabilities, or establish a principal-agent relationship of any form.

The data provided is belived to be accurate and applicable to the unit(s) indicated on the cover. The research engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING : Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground bus in the unit (heavy gauge black wires connect to this bus.)

IMPORTANT : Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

LITHIUM BATTERY HANDLING

This product uses a lithium battery for memory back-up.

WARNING : Lithium batteries are dangerous because they can be exploded by improper handling. Observe the following precautions when handling or replacing lithium batteries.

- Leave lithium battery replacement to qualified service personnel.
- Always replace with batteries of the same type.
- When installing on the PC board by soldering, solder using the connection terminals provided on the battery cells.
- Never solder directly to the cells. Perform the soldering as quickly as possible.
- Never reverse the battery polarities when installing.
- Do not short the batteries.
- Do not attempt to recharge these batteries.
- Do not disasemble the batteries.
- Never heat batteries or throw them into fire.

ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig handtering. Udskiftning ma kun ske med batteri af samme fabrikat og type. lever det brugte batteri tilbage til leverandren.

VARNING

Explosionsfara vid felaktigt batteribyte.
Anvand samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera anvant batteri enligt fabrikantens instruktion.

VAROITUS

Paristo voi rajahtaa, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiiin.
Havita kaytetty paristo valmistajan ohjeiden mukaisesti.
The following information complies with Dutch official Gazette 1995. 45; ESSENTIALS OF ORDER ON THE COLLECTION OF BATTERIES.

- Please refer to the diassembly procedure for the removal of Back-up Battery.
- Leest u voor het verwijderen van de backup batterij deze beschrijving.

WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (Where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

■ WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

SPECIFICATIONS

Digital Section
- Full Digital Signal Processing
- 8 Channel Preamp
- Digital Effects
  - Compressor
  - Chorus, Flanger, Phaser, Rotary Speaker, Tremolo
  - Digital Delay, Tape Echo
  - Spring Reverb, Hall Reverb, Plate Reverb
- Tap Tempo Function (Delay Time)
- Speaker Simulator (16 Types)
- External Controller Function (EXP Pedal/MIDI):8 Controllers/ Parameters
- Wah Function
- Tuner Function (Chromatic, Auto)

MIDI Functions
Receive: Program Change (Program Change Table can be created), Control Change, Bulk In
Transmit: Program Change, Control Change, Bulk Out, Merge Out

Controller Switch

Top Panel

Push Switch x17
UP, DOWN, MANUAL, UTILITY, STORE, COMP, CHORUS, FLANGER, PHASER, ROTARY, TREMOLO, DELAY, TAPE ECHO, SPRING, HALL, PLATE, SP. SIM
Knob x15
AMP SELECT, GAIN, MASTER, TREBLE, MIDDLE, BASS, PRESENCE, COMP, SPEED, DEPTH, TIME, FEEDBACK, LEVEL, REVERB, OUTPUT
Footswitch x4
1, 2, 3, BANK

Rear panel

STAND-BY ON/OFF, INPUT LOW/HIGH

Display

7 Segment LED (3 digit) x1
Push Switch LED x17
Foot Switch LED x4

Connections/Jacks

INPUT: Standard Monaural Phone Jack
OUTPUT L/MONO, R: Standard Monaural Phone Jack
PHONES: Standard Stereo Phone Jack
EXP. PEDAL: Standard Stereo Phone Jack
DIGITAL OUT: COAXIAL
MIDI IN, MIDI OUT: 5 pin DIN

A/D Converter
20 bit + 3 bit Floating

D/A Converter
20 bit

Sampling Frequency
48 kHz

Memory Allocations
Preset: 90
User: 90

Input Level/Impedance (When using preamp bypass)
INPUT HIGH: -25dBm/1Mohm
INPUT LOW: -15dBm/1Mohm

Output Level/Impedance
OUTPUT L/MONO, R: 0dBm/1kohm
PHONES: 0dBm/47ohms (47ohms load)

Power
Exclusive Power Adaptor (AC-10)
AC Output: AC12V, 1000mA

Power Consumption
15W

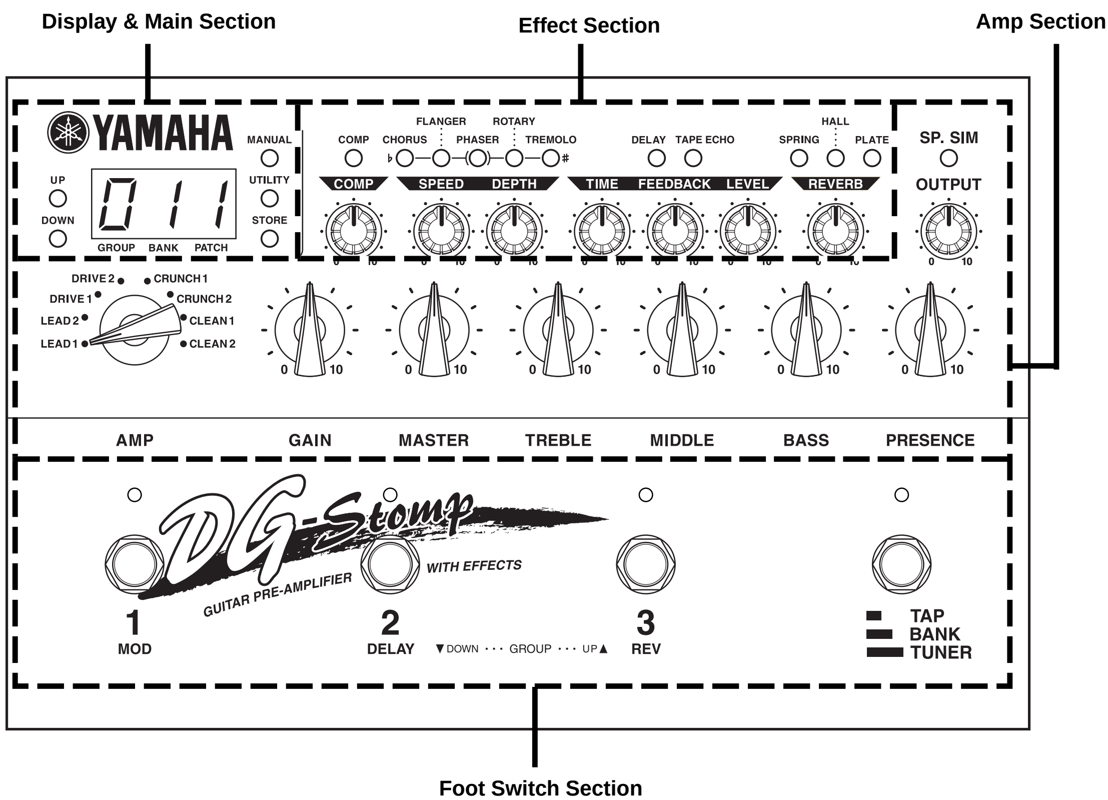
Dimensions (WxHxD)
280x70x184mm (11.0”x2.8”x7.2”)

Weight
2.2kg (4lbs 14oz)

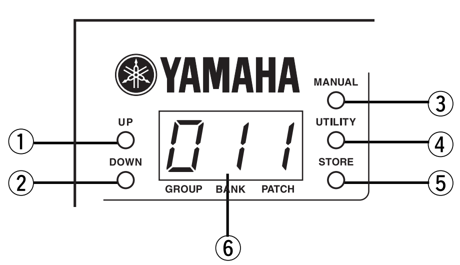
Accessories
Power Adaptor (AC-10)
Owner’s Manual (this booklet)

PANEL LAYOUT

• Top Panel

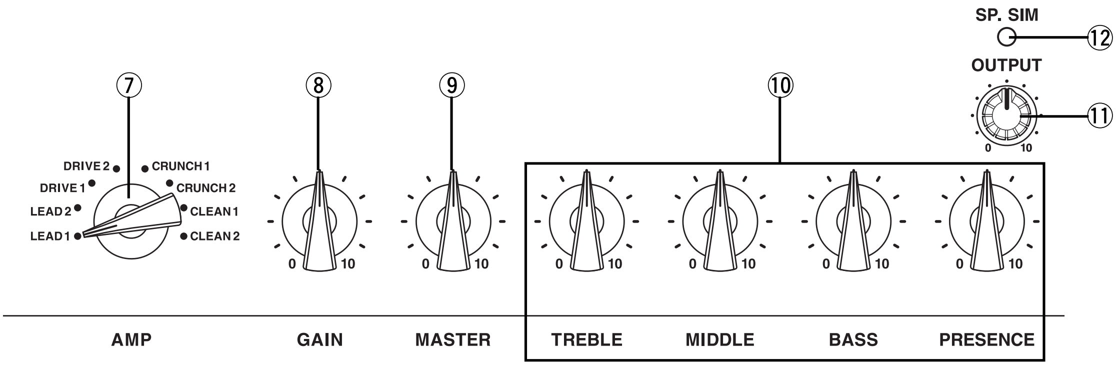


• Display & Main Section



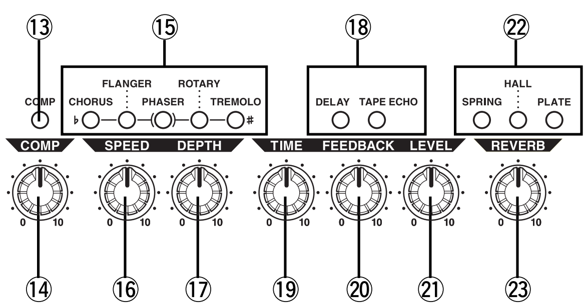
① **Up Button (UP)**
② **Down Button (DOWN)**
③ **Manual Button (MANUAL)**
④ **Utility Button (UTILITY)**
⑤ **Store Button (STORE)**
⑥ **Display**

• **Amp Section**



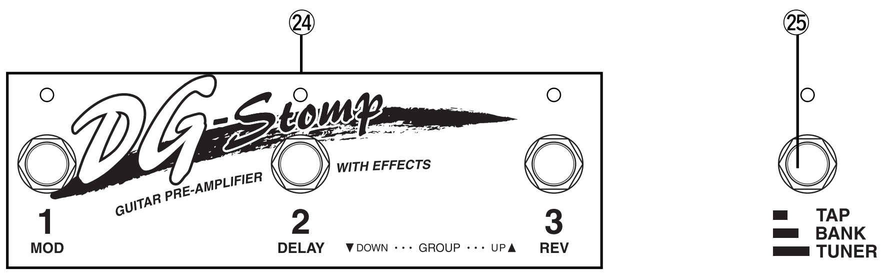
⑦ **Amp Select Switch (LEAD1-CLEAN2)**
⑧ **Gain Control (GAIN)**
⑨ **Master Volume (MASTER)**
⑩ **Tone Controls**
⑪ **Output Level Control (OUTPUT)**
⑫ **Speaker Simulator Button (SP. SIM)**

• **Effect Section**



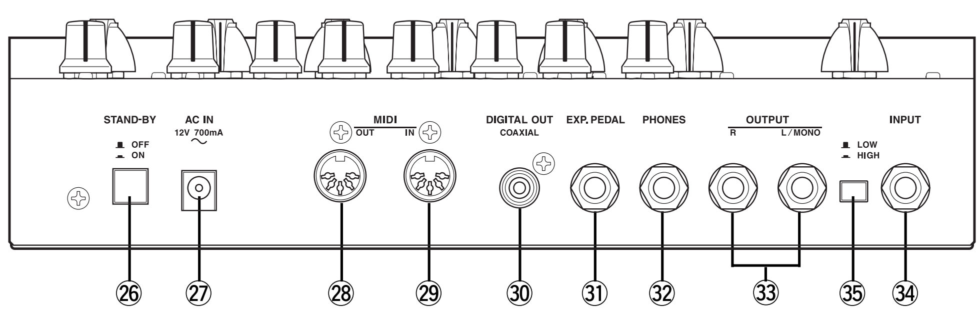
⑬ **Compressor Button (COMP)**
⑭ **Compressor Knob (COMP)**
⑮ **Modulation Group Effect Buttons (CHORUS/FLANGER/PHASER/ROTARY/TREMOLO)**
⑯ **Speed Knob (SPEED)**
⑰ **Depth Knob (DEPTH)**
⑱ **Delay Group Effect Buttons(DELAY/TAPE ECHO)**
⑲ **Time Knob (TIME)**
⑳ **Feedback Knob (FEEDBACK)**
㉑ **Level Knob (LEVEL)**
㉒ **Reverb Group Effect Buttons(SPRING/HALL/PLATE)**
㉓ **Reverb Knob (REVERB)**

• Foot Switch Section



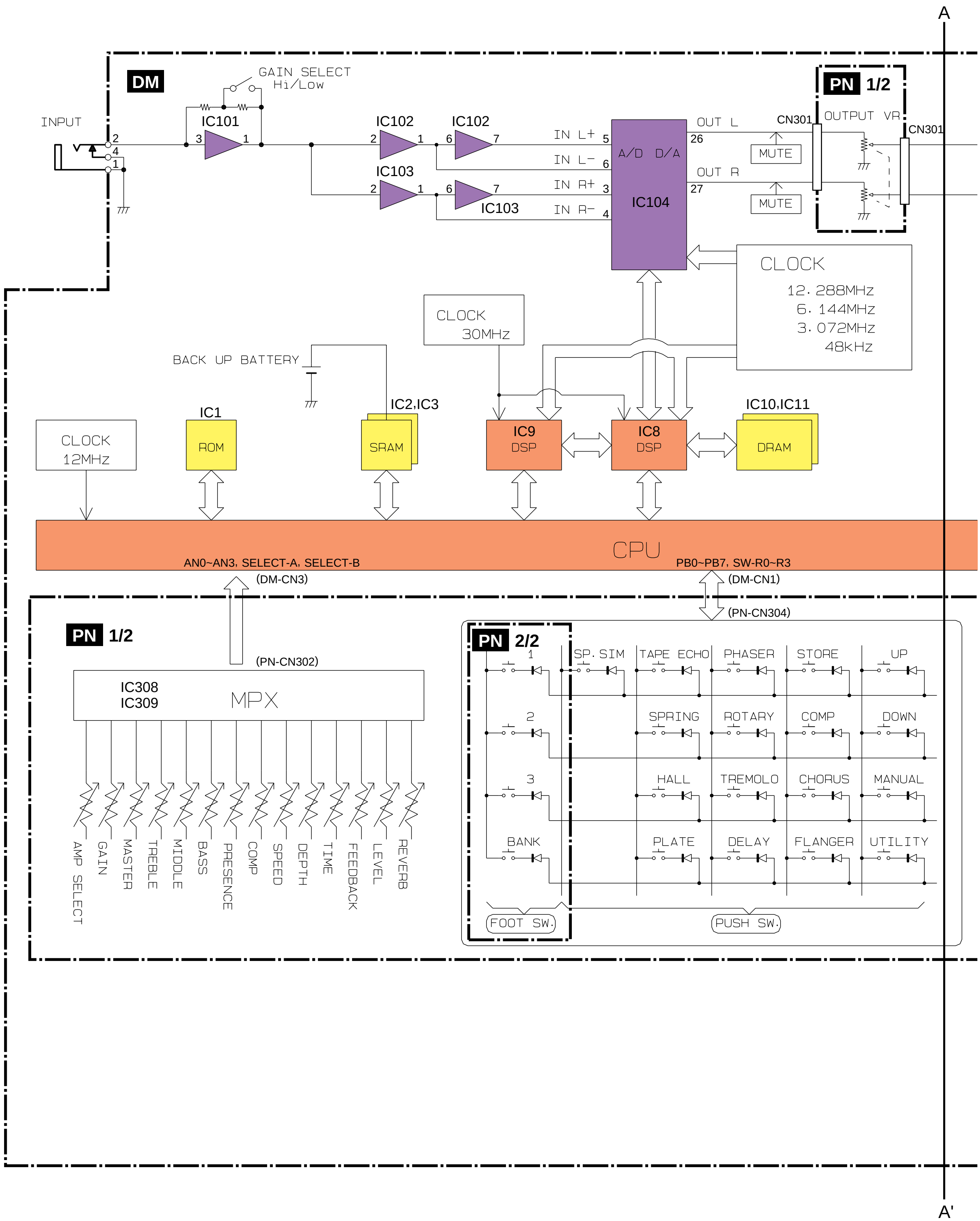
㉔ **Foot Switches 1, 2, 3**
㉕ **Bank Switch (TAP/BANK/TUNER)**

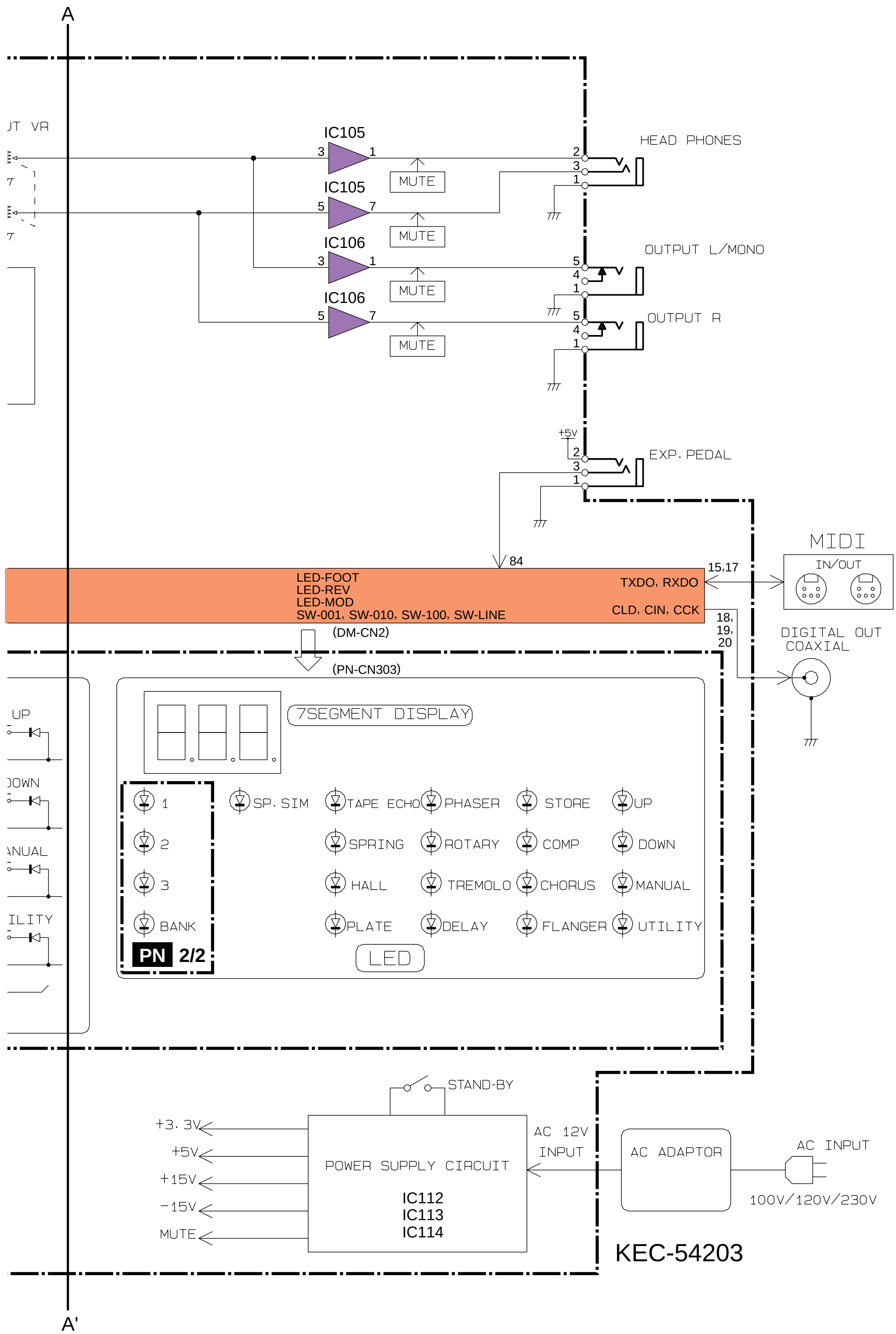
• Rear Panel



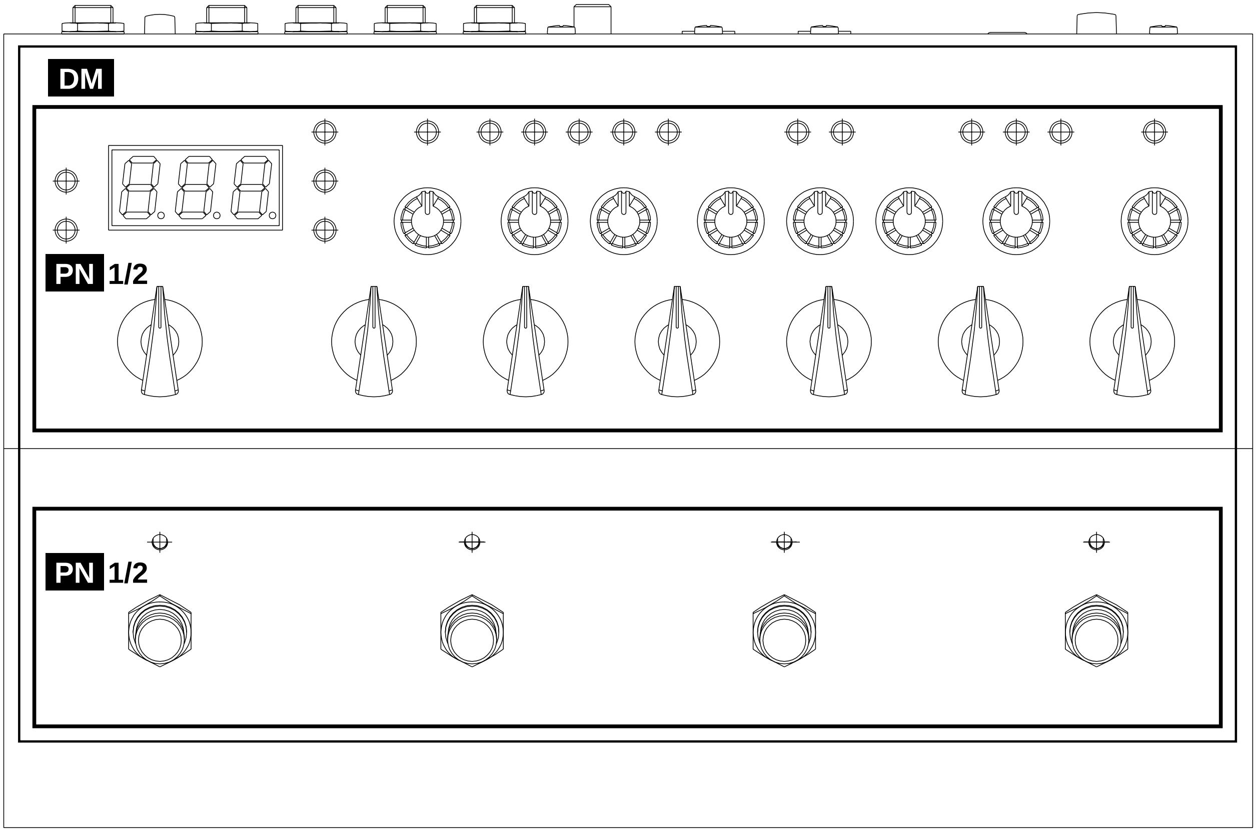
㉖ **Power Switch (STAND-BY ON/OFF)**
㉗ **Power Adaptor Jack (AC IN 12V 700mA)**
㉘ **MIDI OUT Jack**
㉙ **MIDI IN Jack**
㉚ **Digital Out Jack (DIGITAL OUT)**
㉛ **EXP Pedal Jack (EXP. PEDAL)**
㉜ **Headphones Jack (PHONES)**
㉝ **Output Jacks (OUTPUT R, L/MONO)**
㉞ **Input Jack (INPUT)**
㉟ **Input Level Switch (LOW/HIGH)**

■ BLOCK DIAGRAM

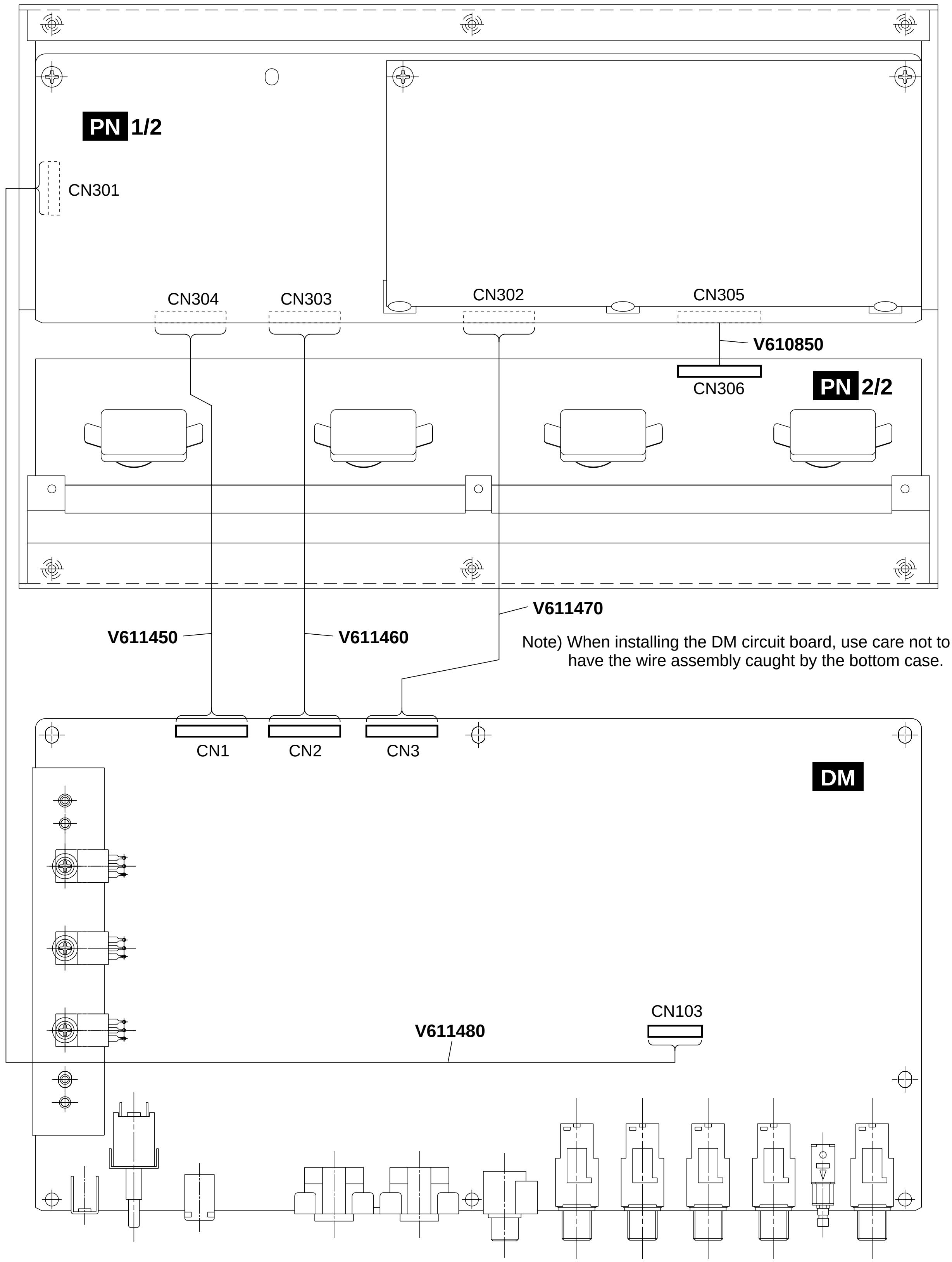



A
IC105
IC105
IC106
IC106
MUTE
MUTE
MUTE
MUTE
HEAD PHONES
OUTPUT L/MONO
OUTPUT R
+5V
EXP. PEDAL
84
LED-FOOT
LED-REV
LED-MOD
SW-001, SW-010, SW-100, SW-LINE
TXDO, RXDO
CLD, CIN, CCK
15,17
18, 19, 20
MIDI
IN/OUT
DIGITAL OUT
COAXIAL
(DM-CN2)
(PN-CN303)
7SEGMENT DISPLAY
UP
DOWN
MANUAL
UTILITY
1
2
3
BANK
PN 2/2
SP. SIM
TAPE ECHO
SPRING
HALL
PLATE
PHASER
ROTARY
TREMOLO
DELAY
STORE
COMP
CHORUS
FLANGER
UP
DOWN
MANUAL
UTILITY
LED
STAND-BY
+3.3V
+5V
+15V
−15V
MUTE
POWER SUPPLY CIRCUIT
IC112
IC113
IC114
AC 12V
INPUT
AC ADAPTOR
AC INPUT
100V/120V/230V
KEC-54203
A'

■ CIRCUIT BOARD LAYOUT



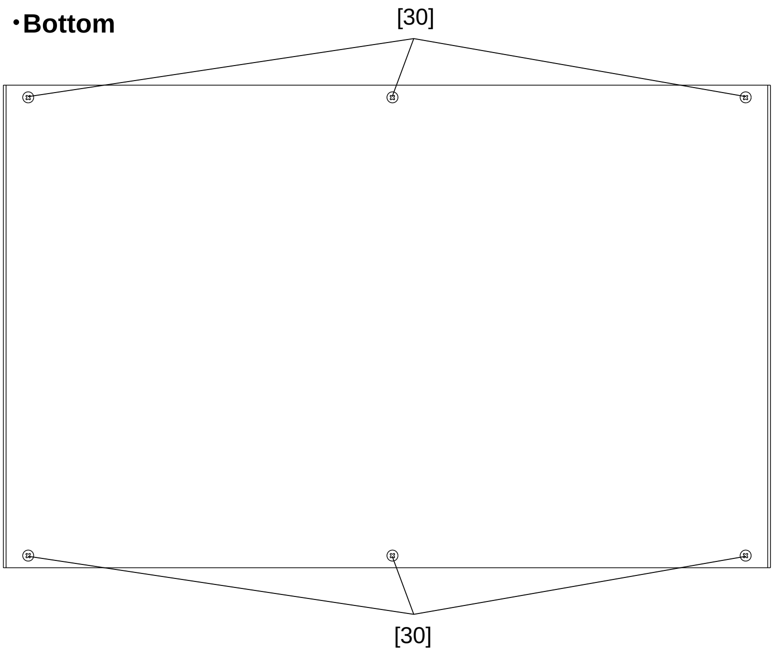
■ WIRING


PN 1/2
CN301
CN304
CN303
CN302
CN305
V610850
CN306
PN 2/2
V611470
V611450
V611460
Note) When installing the DM circuit board, use care not to have the wire assembly caught by the bottom case.
CN1
CN2
CN3
DM
CN103
V611480

DISASSEMBLY PROCEDURE

1. Bottom Case

Remove the six (6) screws marked [30]. The bottom case can then be removed. (Fig. 1)



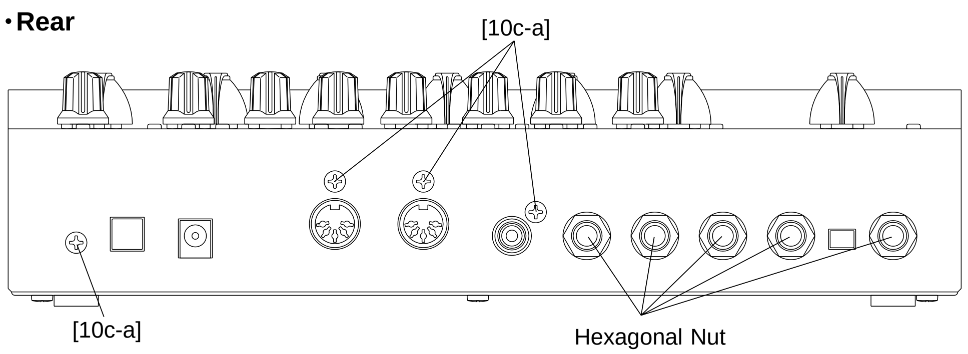
[30]: Bind Head Tapping Screw-B 3.0x8 MFZN2BL (EP600190)

Fig.1

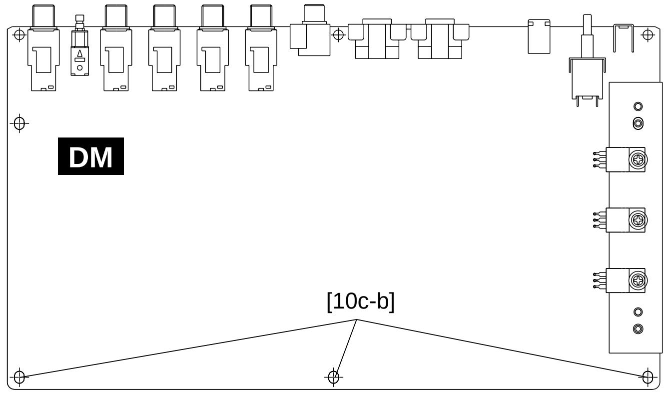
2. DM Circuit Board

2-1. Remove the bottom case. (See Procedure 1.)

2-2. Remove the four (4) screws marked [10c-a] and the five (5) special hexagonal nuts marked [10e] from the rear panel and the three (3) screws marked [10c-b] from the DM circuit board. The DM circuit board can then be removed. (Fig. 2)



•Topcover

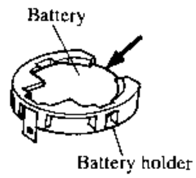


[10c]: Bind Head Tapping Screw-B 3.0x8 MFZN2BL (EP600190)
[10e]: Hexagonal Nut 9.0 12x2 MFNI33 (LX200060)

Fig.2

Battery VN103500
VN103600(Battery holder for VN103500)

• Notice for back-up battery removal
Push the battery as shows in figure, then the battery will pop up.



3. PN Circuit Boards (1/2, 2/2)

3-1. Remove the bottom case. (See Procedure 1.)

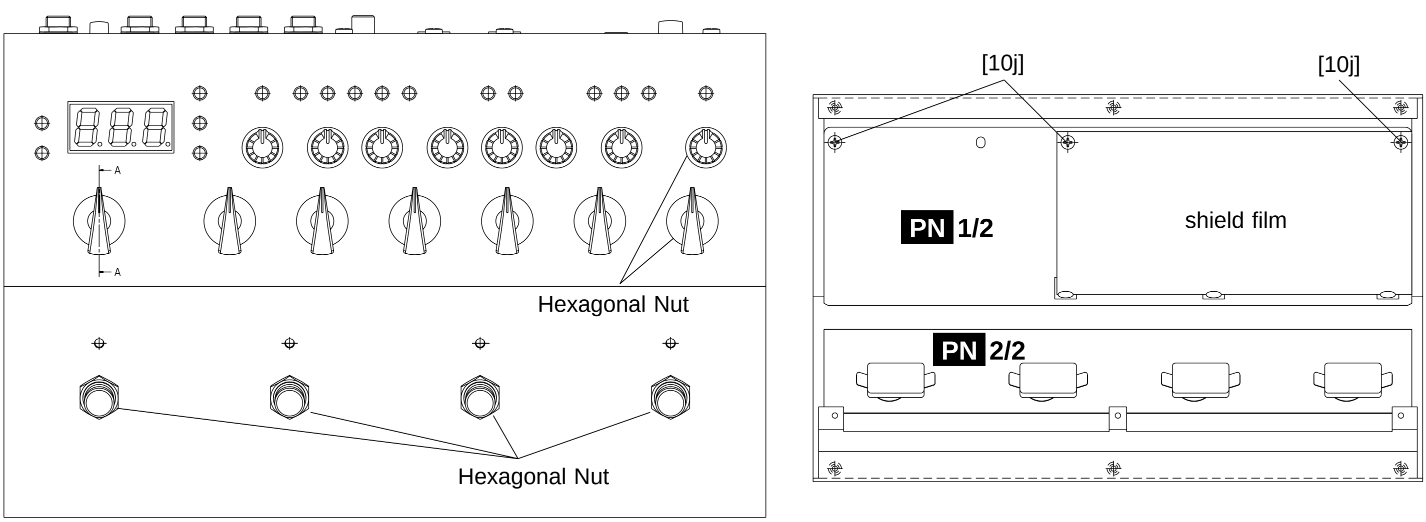
3-2. Remove the DM circuit board. (See Procedure 2.)

3-3-1. PN1/2 Circuit Board

Remove the controls, knobs and special hexagonal nuts from the front panel, the three (3) screws marked [10j] and the shield film from the PN1/2 circuit board. The PN1/2 circuit board can then be removed. (Fig. 3)

3-3-2. PN2/2 Circuit Board

Remove the four (4) special hexagonal nuts from foot switches. The PN 2/2 circuit board can then be removed. (Fig. 3)



[10j]:Bind Head Tapping Screw-P 3.0x12 MFZN2BL (VC161100)

Fig.3

4. Heat Sink

4-1. Remove the two (2) screws marked [A-a] from the soldered face of the DM circuit board and the three (3) screws marked [A-b] from IC112, IC113 and IC114. The heat sink can then be removed from the DM circuit board. (Fig. 4)

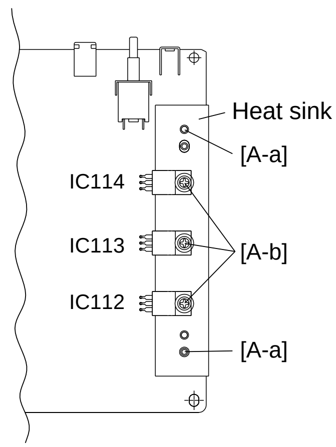


Fig.4

LSI PIN DESCRIPTION

• HD6413002FP16 (XQ375A00) CPU

DM: IC12

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	PA6	O	Port A	51	A12	O	
2	PA7	O	Address bus	52	A13	O	
3	VCC		Power supply	53	A14	O	
4	PB0	I		54	A15	O	Address bus
5	PB1	I		55	A16	O	
6	PB2	I		56	A17	O	
7	PB3	I	Port B	57	A18	O	
8	PB4	I		58	A19	O	
9	PB5	I		59	VSS		Ground
10	PB6//DREQ0	I		60	P60//WAIT	I	
11	PB7//DREQ1	I		61	P61//BREQ	I	Port 6
12	/RESO	O	Reset	62	P62//BACK	I	
13	VSS		Ground	63	Ø	O	Øout
14	P90/TXD0	O	Transmit data (MIDI OUT)	64	/STBY	I	Stand-by mode signal
15	P91/TXD1	O	KSN-ACK	65	/RES	I	Reset
16	P92/RXD0	I	Receive data (MIDI IN)	66	NMI	I	Non-maskable interrupt
17	P93/RXD1	I	KSN-RX	67	VSS		Ground
18	P94/SCK0	O	Port 9	68	EXTAL	I	Clock
19	P95/SCK1	I	Port 9	69	XTAL	O	Clock
20	P40/D0	I/O		70	VCC		Power supply
21	P41/D1	I/O		71	/AS	O	Address strobe
22	P42/D2	I/O		72	/RD	O	Read strobe
23	P43/D3	I/O		73	/HWR	O	Write strobe (High)
24	VSS		(Ground)	74	/LWR	O	Write strobe (Low)
25	P44/D4	I/O		75	MD0	I	
26	P45/D5	I/O		76	MD1	I	Mode select
27	P46/D6	I/O		77	MD2	I	
28	P47/D7	I/O	Data bus	78	AVCC		Analog power supply
29	D8	I/O		79	VREF	I	Reference voltage
30	D9	I/O		80	P70/AN0	I	Analog data input (EQ)
31	D10	I/O		81	P71/AN1	I	Analog input (EQ)
32	D11	I/O		82	P72/AN2	I	Analog data input
33	D12	I/O		83	P73/AN3	I	Analog input (CS)
34	D13	I/O		84	P74/AN4	I	Analog data input (BEND)
35	D14	I/O		85	P75/AN5	I	Analog input (MOD)
36	D15	I/O		86	P76/AN6	I	Analog input (FC)
37	VCC		Power supply	87	P77/AN7	I	Analog input (BAT)
38	A0	O		88	AVSS		Analog ground
39	A1	O		89	P80	O	Port 8
40	A2	O		90	P81//CS3	O	
41	A3	O		91	P82//CS2	O	Chip select
42	A4	O		92	P83//CS1	O	
43	A5	O		93	P84//CS0	O	
44	A6	O	Address bus	94	VSS		Ground
45	A7	O		95	PA0	I	
46	VSS		(Ground)	96	PA1	I	
47	A8	O		97	PA2	I	
48	A9	O		98	PA3	O	Port A
49	A10	O		99	PA4	O	
50	A11	O		100	PA5	O	

• **YSS910-S** (XV988A00) **DSP6** (Digital Signal Processor)

DM: IC8, IC9

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vdd		Power supply (3.3 V)	89	Vss		Ground
2	Vss		Ground	90	DB13	I/O	
3	XI	I	System master clock input (60 MHz or 30 MHz)	91	DB14	I/O	
4	XO	O	System master clock output (High or 30 MHz)	92	DB15	I/O	
5	Vdd		Power supply (5 V)	93	DB16	I/O	
6	/SYNCI	I	Sync. signal input	94	DB17	I/O	Parallel data bus
7	/SYNCO	O	Sync. signal output	95	DB18	I/O	
8	Vdd		Power supply (5 V)	96	DB19	I/O	
9	CKI	I	System clock input (30 MHz)	97	DB20	I/O	
10	CKO	O	System clock output (30 MHz)	98	DB21	I/O	
11	CKSEL	I	System master clock select (0: 60 MHz, 1: 30 MHz)	99	DB22	I/O	
12	Vss		Ground	100	Vss		Ground
13	MCKS	I	Serial I/O master clock input (128 x Fs)	101	Vdd		Power supply (3.3 V)
14	/SSYNC	I	Serial I/O Sync. signal output	102	DB23	I/O	
15	/IC	I	Initial clear	103	DB24	I/O	
16	/TEST	I	Test mode setting (0: Test, 1: Normal)	104	DB25	I/O	
17	BTYP	I	Data bus type select (0: 8 bit, 1: 16 bit)	105	DB26	I/O	
18	/IRQ	O	IRQ output	106	DB27	I/O	Parallel data bus
19	TRIG	I/O	Trigger signal input/output	107	DB28	I/O	
20	Vdd		Power supply (5 V)	108	DB29	I/O	
21	Vss		Ground	109	DB30	I/O	
22	/CS	I	chip select signal input	110	DB31	I/O	
23	/WR	I	Write signal input	111	TIMO/DBOB	I/O	Timing signal output/ Parallel data bus output/ input
24	/RD	I	Read signal input	112	Vss		Ground
25	CA7	I/O		113	Vdd		Power supply (5 V)
26	CA6	I/O		114	DA00	I/O	
27	CA5	I/O		115	DA01	I/O	
28	CA4	I/O	Address bus of internal register	116	DA02	I/O	
29	CA3	I/O		117	DA03	I/O	Memory data bus
30	CA2	I/O		118	DA04	I/O	
31	CA1	I/O		119	DA05	I/O	
32	Vss		Ground	120	DA06	I/O	
33	Vdd		Power supply (3.3 V)	121	DA07	I/O	
34	CD15	I/O		122	Vss		Ground
35	CD14	I/O		123	DA08	I/O	
36	CD13	I/O		124	DA09	I/O	
37	CD12	I/O		125	DA10	I/O	
38	CD11	I/O	Data bus of internal register	126	DA11	I/O	Memory data bus
39	CD10	I/O		127	DA12	I/O	
40	CD09	I/O		128	DA13	I/O	
41	CD08	I/O		129	DA14	I/O	
42	CD07	I/O		130	DA15	I/O	
43	CD06	I/O		131	Vss		Ground
44	Vss		Ground	132	Vdd		Power supply (3.3 V)
45	Vdd		Power supply (3.3 V)	133	(n.c)		Not used
46	Vdd		Power supply (5 V)	134	Vdd		Power supply (5 V)
47	CD05	I/O		135	DA16	I/O	
48	CD04	I/O		136	DA17	I/O	
49	CD03	I/O	Data bus of internal register	137	DA18	I/O	
50	CD02	I/O		138	DA19	I/O	Memory data bus
51	CD01	I/O		139	DA20	I/O	
52	CD00	I/O		140	DA21	I/O	
53	/WAIT	O	WAIT output	141	DA22	I/O	
54	Vss		Ground	142	DA23	I/O	
55	SI0	I		143	Vss		Ground
56	SI1	I		144	DA24	I/O	
57	SI2	I		145	DA25	I/O	
58	SI3	I	Serial data input	146	DA26	I/O	
59	SI4	I		147	DA27	I/O	Memory data bus
60	SI5	I		148	DA28	I/O	
61	SI6	I		149	DA29	I/O	
62	SI7	I		150	DA30	I/O	
63	Vss		Ground	151	DA31	I/O	
64	Vdd		Power supply (5 V)	152	Vdd		Power supply (5 V)
65	SO0	O		153	Vss		Ground
66	SO1	O		154	A00	O	
67	SO2	O		155	A01	O	
68	SO3	O	Serial data output	156	A02	O	
69	SO4	O		157	A03	O	
70	SO5	O		158	A04	O	Memory address (SRAM, PSRAM, DRAM)
71	SO6	O		159	A05	O	
72	SO7	O		160	A06	O	
73	Vss		Ground	161	A07	O	
74	DB00	I/O		162	A08	O	
75	DB01	I/O		163	A09	O	
76	DB02	I/O		164	Vss		Ground
77	DB03	I/O		165	Vdd		Power supply (3.3 V)
78	DB04	I/O		166	A10	O	Memory address (SRAM, PSRAM, DRAM)
79	DB05	I/O		167	A11	O	
80	DB06	I/O	Parallel data bus	168	A12	O	
81	DB07	I/O		169	A13	O	Memory address (SRAM, PSRAM)
82	DB08	I/O		170	A14	O	
83	DB09	I/O		171	A15/RAS	O	Memory address (SRAM, PSRAM), /RAS (DRAM)
84	DB10	I/O		172	A16/CAS	O	Memory address (SRAM, PSRAM), /CAS (DRAM)
85	DB11	I/O		173	A17/CE	O	Memory address (SRAM), /CE (PSRAM)
86	DB12	I/O		174	/WE	O	Memory write enable signal
87	Vdd		Power supply (5 V)	175	/OE	O	Memory output enable signal
88	Vdd		Power supply (3.3 V)	176	Vdd		Power supply (5 V)

● YM3437C-F (XM530A00) DIT2 (Digital Format Interface Transmitter)

DM: IC17

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vss		Ground	9	MUTE	I	Mute
2	MCLK	I	Master clock input	10	VFL	I	Validity flag
3	DM0	I	DIN/BCLK/WCLK format select	11	CCK	I	C,U bit clock input/C bit data input
4	DM1	I	DM1,DM0=0,0 DSP,LDSP (64 bit,LSB first) DM1,DM0=0,1stereo,DSP (64 bit,MSB first) DM1,DM0=1,0 DSP2 (128 bit,MSB first) DM1,DM0=1,1 BB (64 bit,MSB first)	12	CIN	I	C,U bit data input/U bit data input
5	RES	I	System reset	13	CLD	I	End of C,U bit input/16,20 bit/24 bit select
6	WCIN	I	Word clock input	14	CNTR	I	32 bit counter reset/Top of block
7	DIN	I	Digital audio serial data input	15	CSM	I	Channel status input mode select CSM=0 Asynchronous mode CSM=1 Synchronous mode
8	VDD		Power supply (+5 V)	16	DOUT	O	Digital interface formatted data output

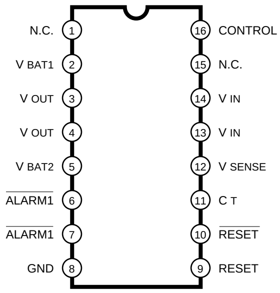
● AK4520A-VF-E2 (XT802A00) DAC & ADC

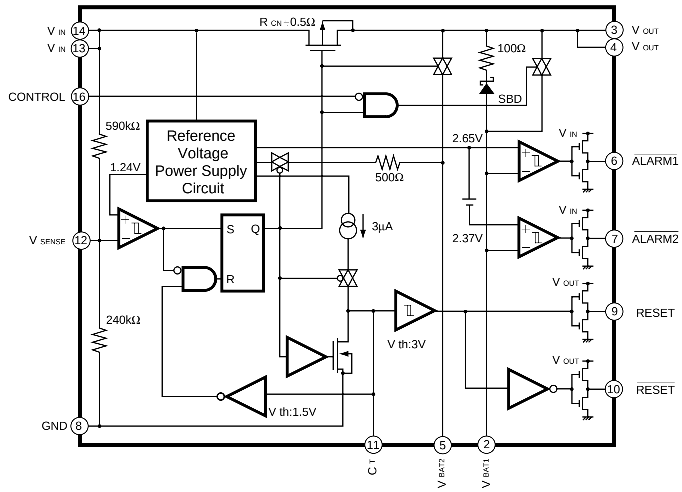
DM: IC104

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	VREFH	I	Positive Voltage Reference Input, VA	15	MCLK	I	Master Clock Input
2	VREFL	I	Negative Voltage Reference Input, AGND	16	DEM0	I	De-emphasis Frequency Select
3	AINR+	I	Rch Analog Positive Input	17	DEM1	I	De-emphasis Frequency Select
4	AINR-	I	Rch analog Negative Input	18	TST3	I/O	Test Pins (Pull Down Pins)
5	AINL+	I	Lch Analog Positive Input	19	TST2	I/O	
6	AINL-	I	Lch analog Negative Input	20	TST1	I	
7	VA	-	Analog Power Supply	21	VD	-	Digital Power Supply
8	AGND	-	Analog Ground	22	DGND	-	Digital Ground
9	DIF0	I	Audio Data Interface Format	23	/PWDA	I	DAC power-Down Mode
10	DIF1	I	Audio Data Interface Format	24	/PWAD	I	ADC power-Down Mode
11	LRCK	I	Input/Output Channel Clock	25	CMODE	I	Master Clock Select (“H”:384 fs,“L”:256 fs)
12	SCLK	I	Audio Serial Data Clock	26	AOUTL	O	Lch Analog Output
13	SDTI	I	Audio Serial Data Input	27	AOUTR	O	Rch Analog Output
14	SDTO	O	Audio Serial Data Output	28	VCOM	O	Common Voltage Output, VA/2

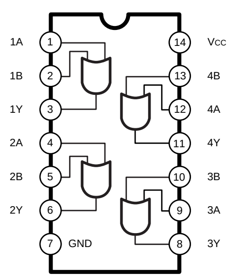
IC BLOCK DIAGRAM

● **MB3790PF**(XR967A00)
DM: IC4
ASSP

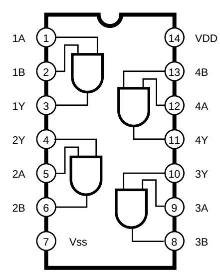




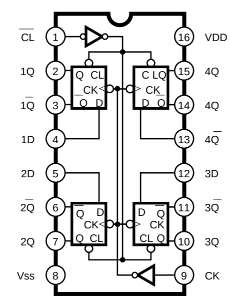
● **74AHC32DT**(XZ103A00)
DM: IC5, IC6
OR



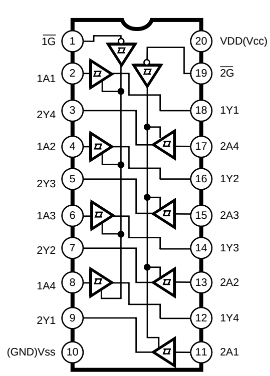
● **74HC08DT**(XZ108A00)
DM: IC7
AND



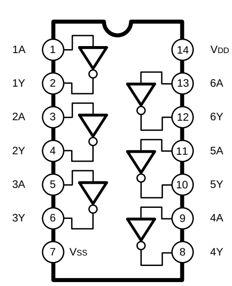
● **74HC175DT**(XZ113A00)
DM: IC110
Quad D-Type Flip-Flop



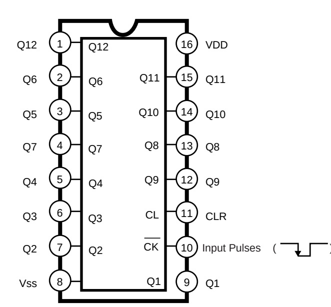
● **74HC244DT**(XZ109A00)
DM: IC14, IC15, IC16
Bus Buffer



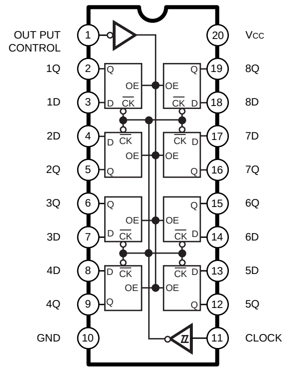
● **74HCU04DT** (XZ110A00)
DM: IC107
INVERTER



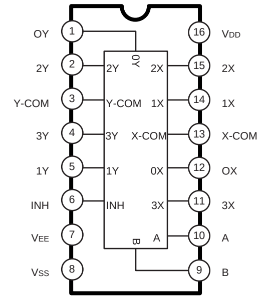
● **TC74HC4040F**(XR684A00)
DM: IC108
12-Stage Binary Ripple Counter



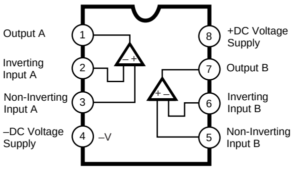
● **74HC374DT**(XZ102A00)
PN: IC301~IC307
D-FF



● **74HC4052DT**(XZ101A00)
PN: IC308, IC309
Multiplexer

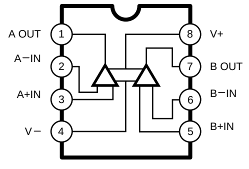


● **NJM072M**(XC458A00)
DM: IC101
OP AMP



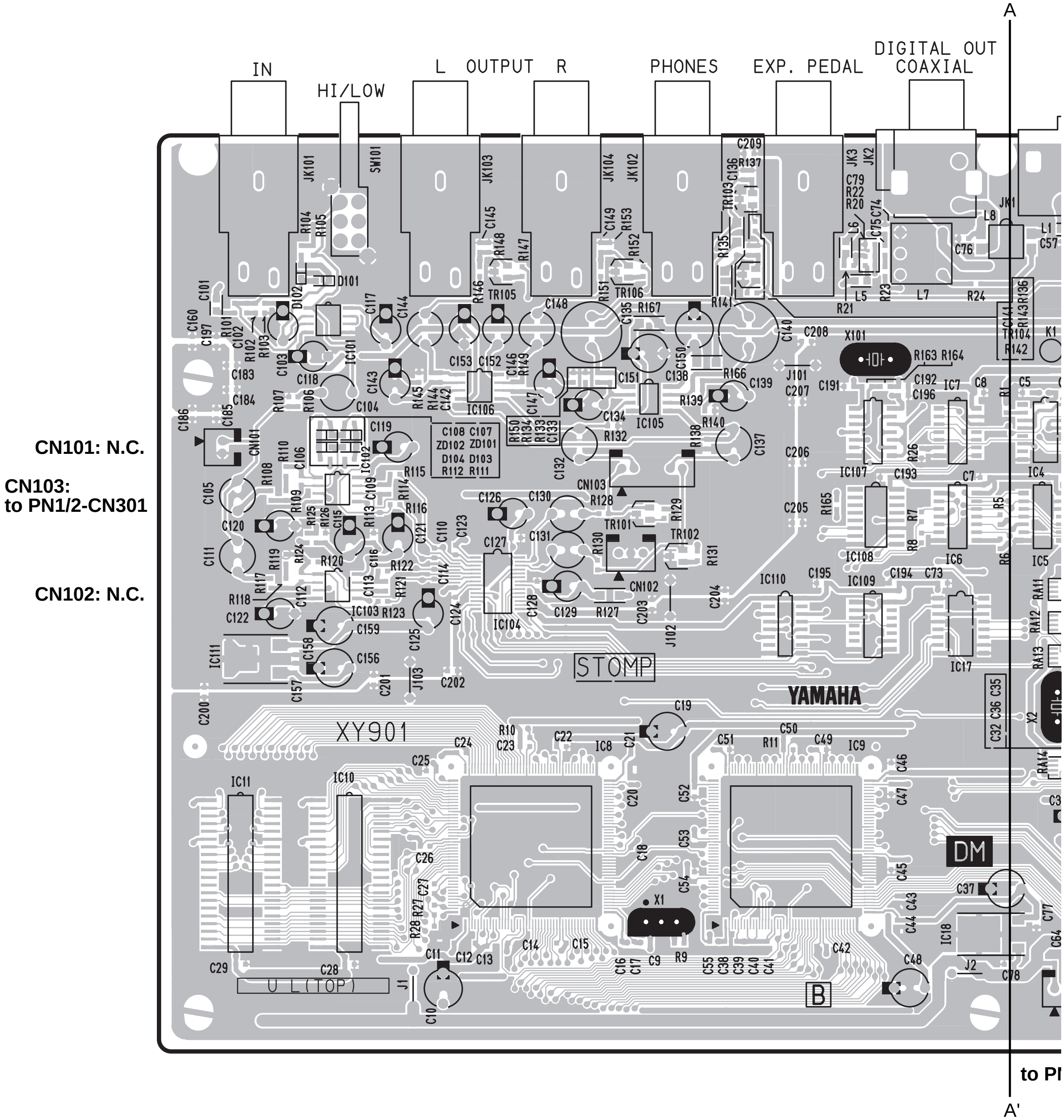
● **NJM5532M** (XC011A00)
DM: IC102, IC103, IC106

● **NJM4556AMT1** (XQ138A00)
DM: IC105
OP AMP

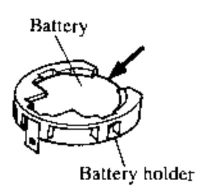


CIRCUIT BOARDS

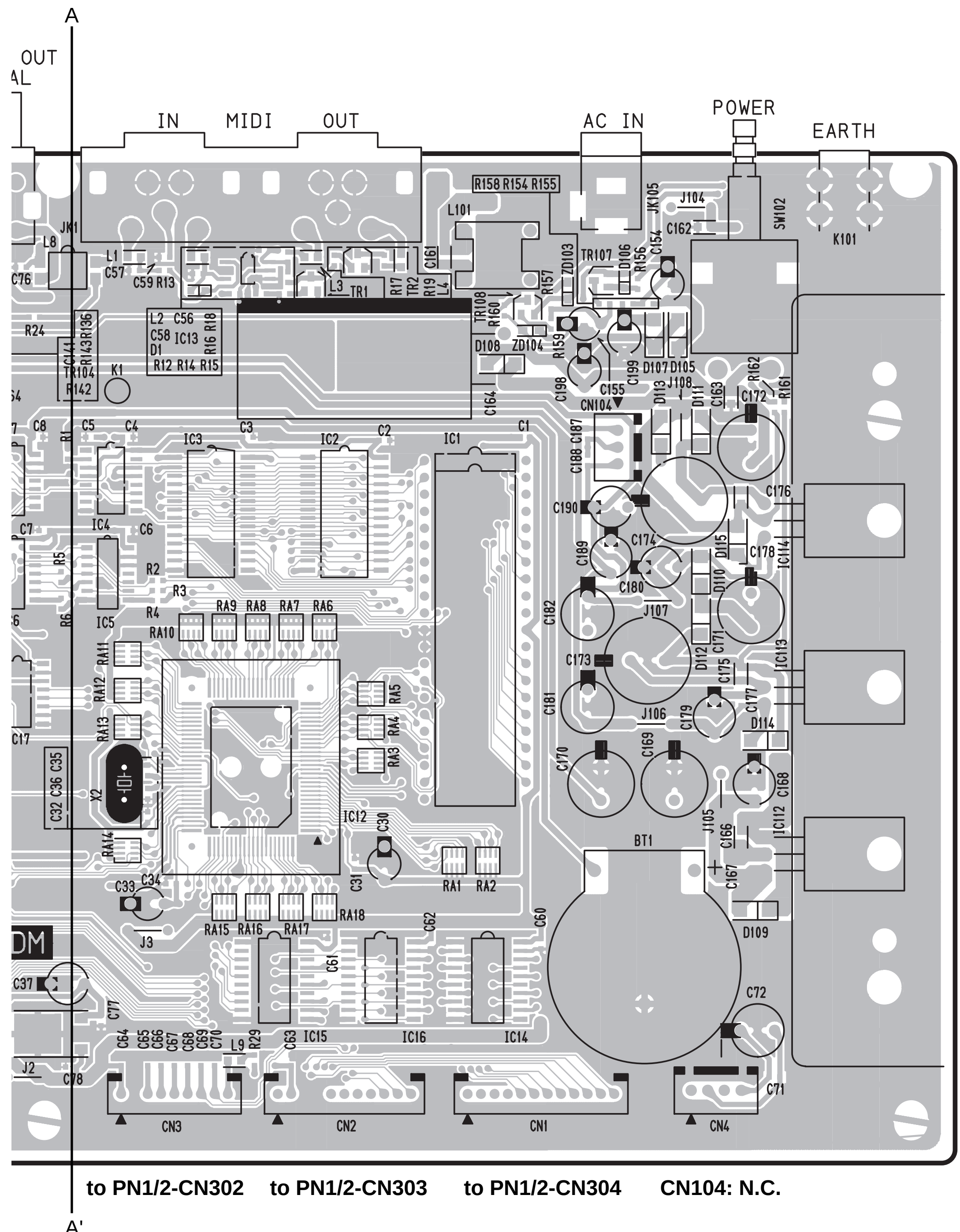
• DM Circuit Board



Battery VN103500
VN103600(Battery holder for VN103500)



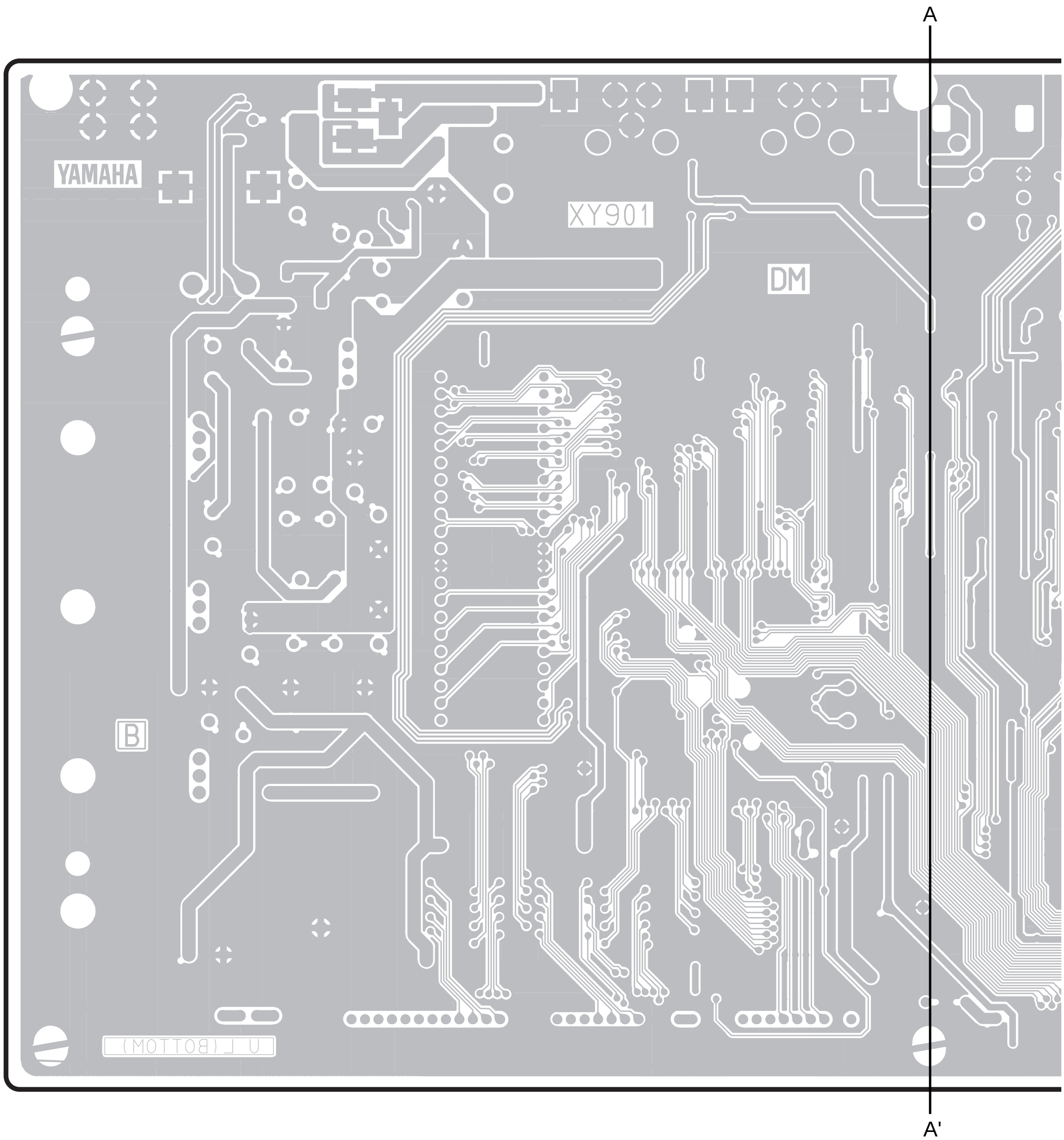
• Notice for back-up battery removal
Push the battery as shows in figure, then the battery will pop up.

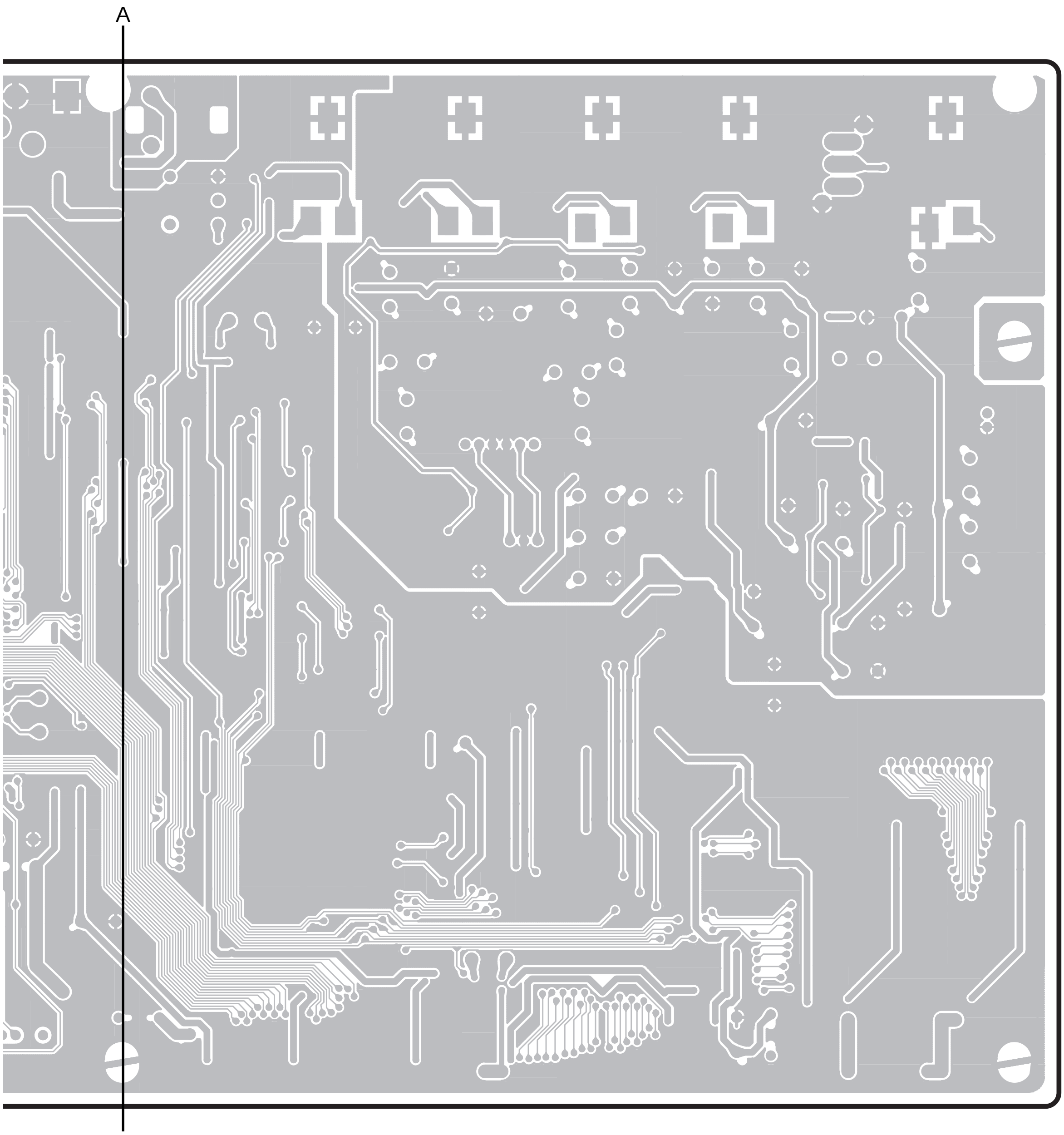


Component side

DM: CNA-V588000 ⚠0

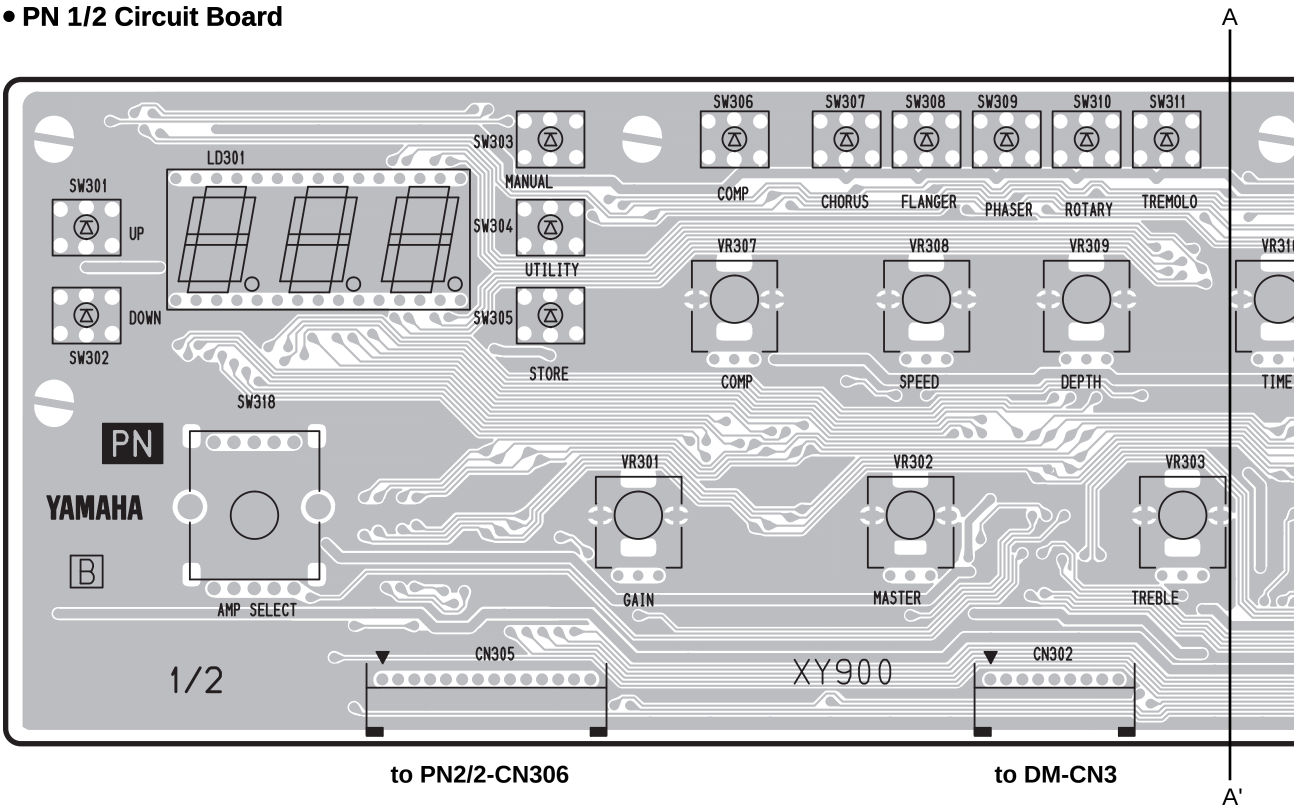
• **DM Circuit Board**



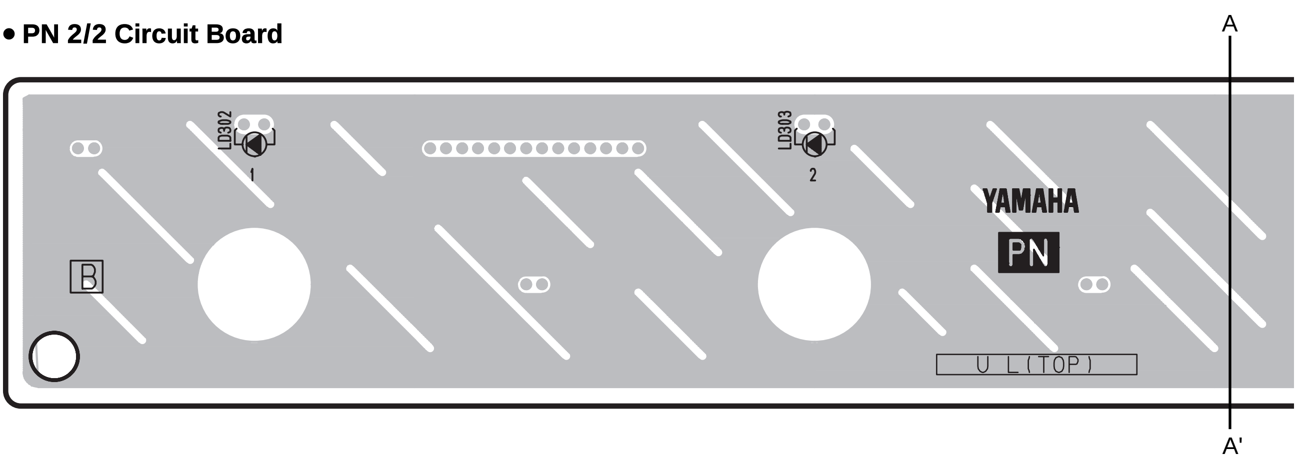


Pattern side

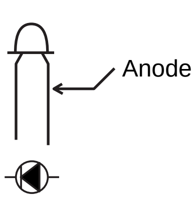
• **PN 1/2 Circuit Board**



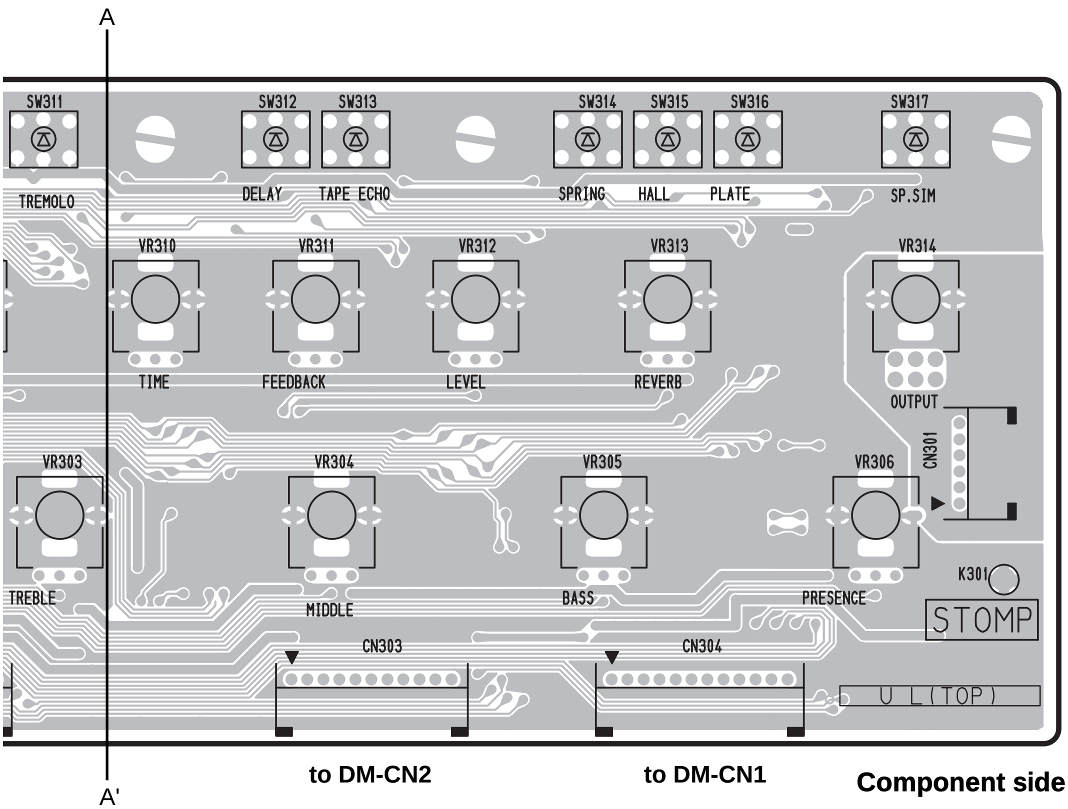
• **PN 2/2 Circuit Board**



• **LD302, LD303, LD304 and LD306 installation**



PN: CNA-V587990 0

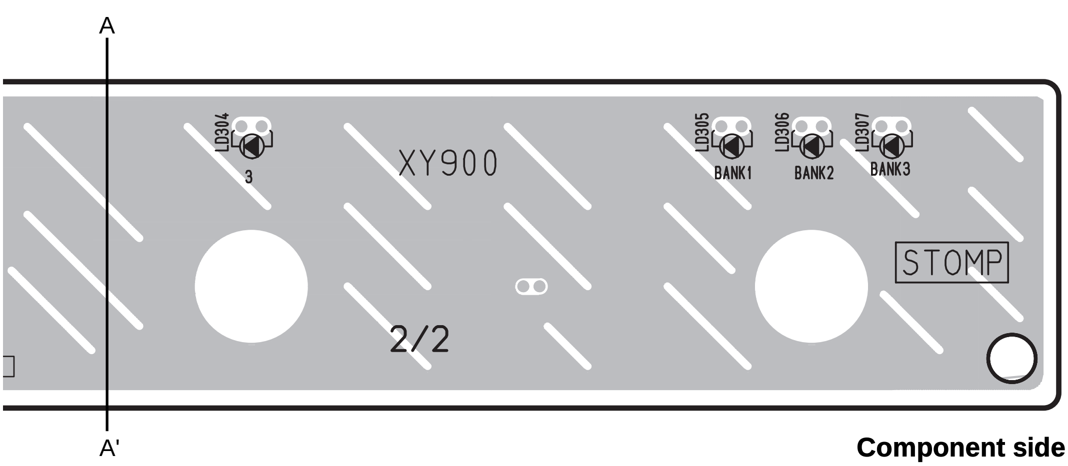


to DM-CN103

to DM-CN2

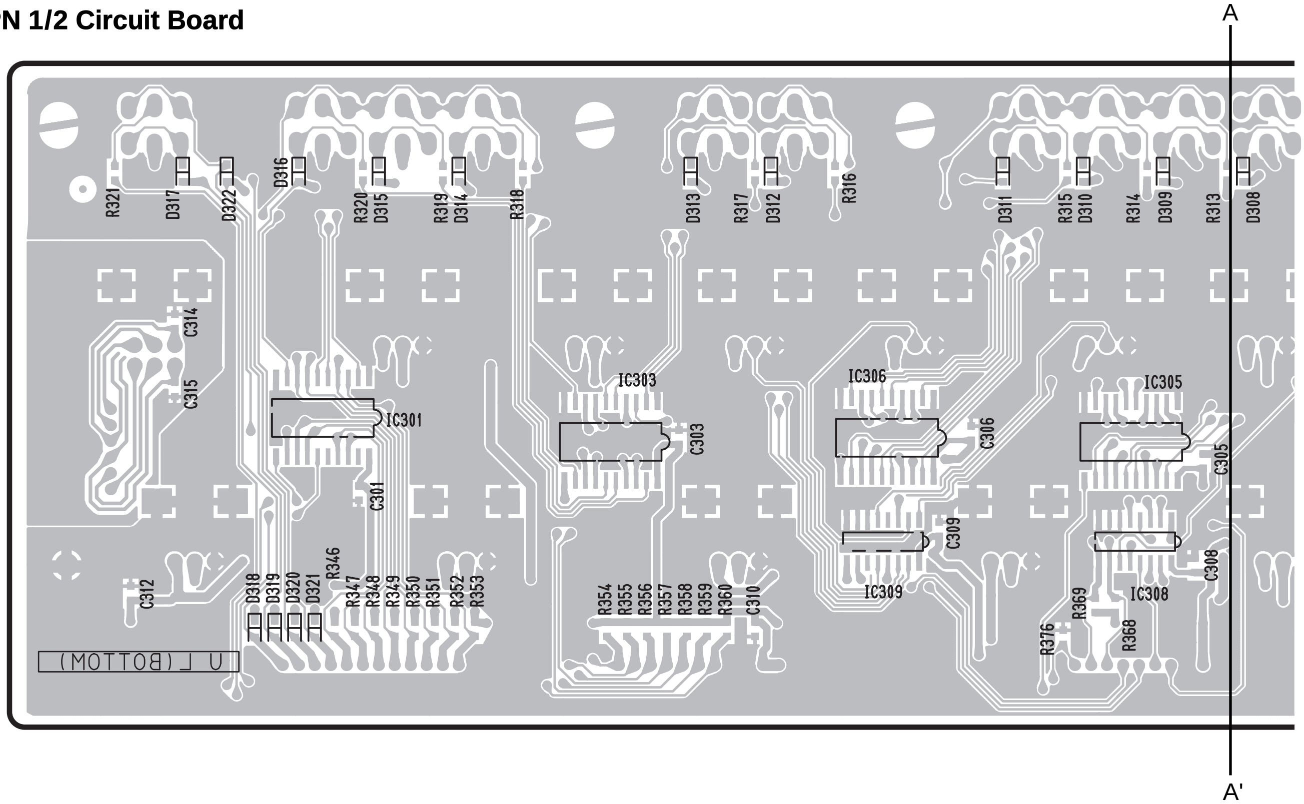
to DM-CN1

Component side

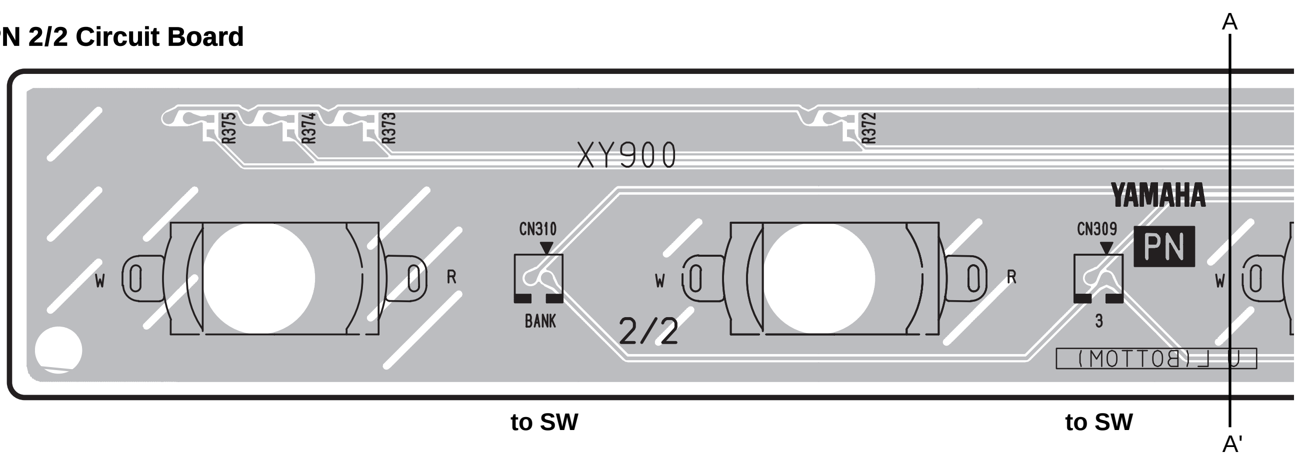


Component side

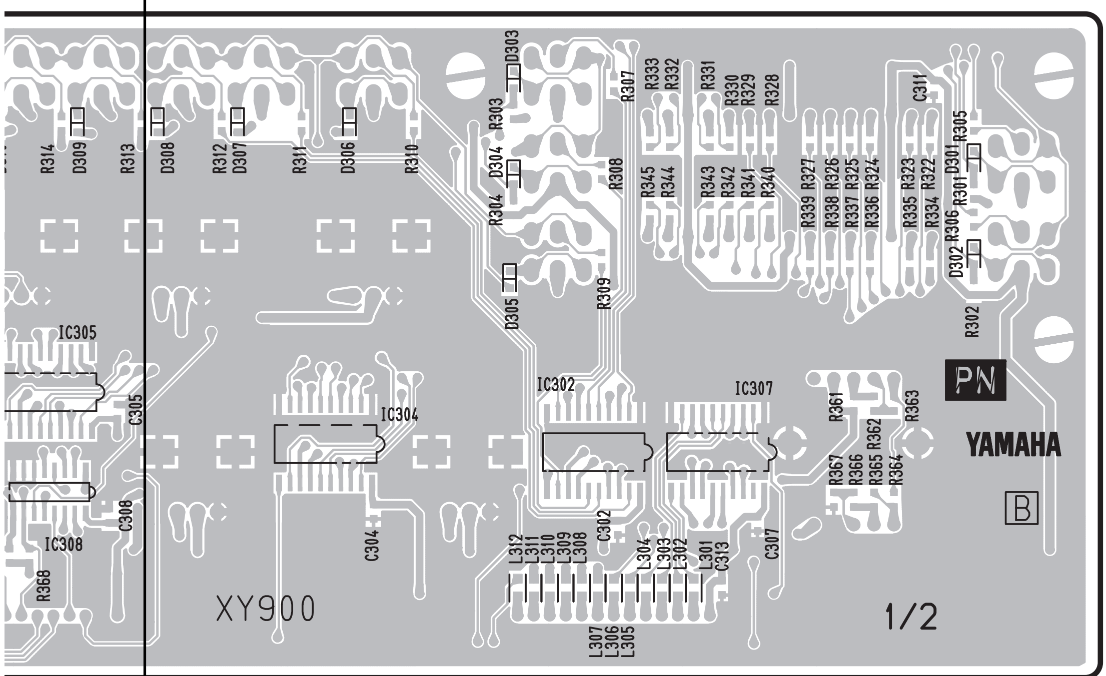
• **PN 1/2 Circuit Board**



• **PN 2/2 Circuit Board**



A

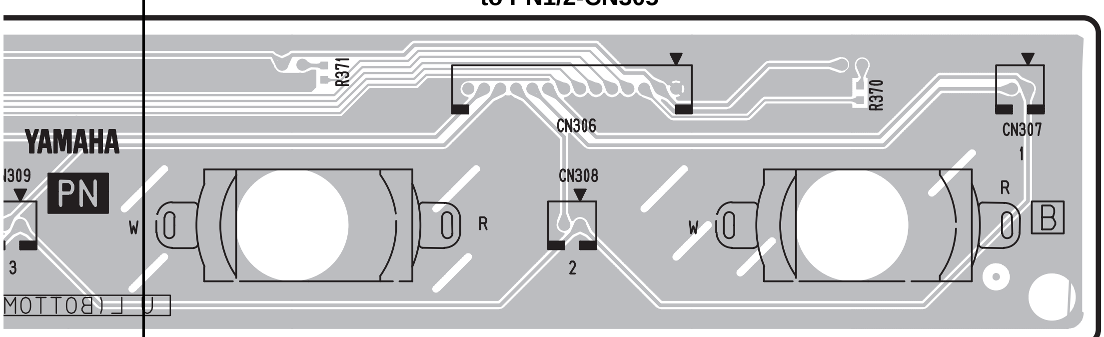


A'

Pattern side

A

to PN1/2-CN305



to SW

SW

to SW

Pattern side

A'

TEST PROGRAM

A. Connect each terminal as follows

- INPUT Monaural input
- OUT L/MONO Monaural output (RL47Kohm)
- OUT R Monaural output (RL47Kohm)
- HEAD PHONES Stereo output (323ohm each)
- EXP. PEDAL Connect VR of B50K.
  Pin 1 of JK: MIN of VR, Pin 2 of JK: MAX of VR, Pin3 of JK: CENTER of VR
- DIGITAL OUT Connect the DA converter.
- MIDI IN, MIDI OUT Connect IN and OUT by using DIN 5P cable.
- HIGH/LOW SW Used to select the input level.
  OFF: 0dB, ON: +10dB
- AC IN Connect the AC adapter.
- STAND-BY SW Power switch

B. TEST PROGRAM

0: LED Check
1: SW Check
2: VR Check
3: Battery Check
4: MIDI Check
5: SRAM Check
6: DSP Check

C. STARTING THE TEST PROGRAM

While pressing the MANUAL, STORE and HALL switches, turn on the POWER switch. The TEST program will then be started.

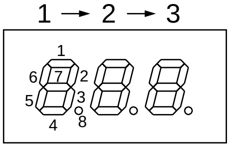
D. SELECTING THE TEST NUMBER

Using the UP and DOWN switches, select the test number and press the STORE switch to confirm selection.

E. TEST PROCEDURE

0: LED Check

- Using the UP and DOWN switches, select “0” and then press the STORE switch.
- LED segments light up one after another starting with “UP”. When “SP.SIM” is reached, “BANK”, “3”, “2” and “1” light up followed by 7 segments in the following order from the left end. After that, all LED segments light up and go out.



1: SW Check

- Using the UP and DOWN switches, select “1” and then press the STORE switch.
- Starting with the UP switch, press the switches whose LED lights up one after another. After “SP.SIM”, “BANK”, “3”, “2” and “1”, all LED segments should light up and then go out.
- Numbers (0 to 20) are indicated at the right end of the 7 segment LED.
- If “E” representing an error appears at the left end, press the UTILITY switch for resetting.

2: VR Check

- Using the UP and DOWN switches, select “2” and then press the STORE switch.
- Execute checking with “AMP SELECT” and “GAIN” to “PRESENCE” in that order, next from “COMP” to “REVERB” and finally until “EXP. PEDAL”
- Turn the control fully in the direction toward the left 7 segment LED which is turned on. If the test result is OK, the right 7 segment LED lights up. Then turn the control to that direction. If the test result is OK, proceed to the next VR. After completing this check, return the control to the center position.
- If an error exists outside of the control being checked, “E” meaning an error appears at the left end. In such case, press the UTILITY switch for resetting.
- At the end of all VR checks, all LED segments light up and go out.

3: Battery Check

- Using the UP and DOWN switches, select “3” and then press the STORE switch.
- If the check result is OK, all LED segments light up and go out.
- “E” appears in case of an error.

4: MIDI Check

- Using the UP and DOWN switches, select “4” and then press the STORE switch.
- If the check result is OK, all LED segments light up and go out. Then checking advances to the next step.
- In case of an error, “E” is indicated by LED.
- The numeric figure at the right end of LEF represents, 0: transmission and 1: reception.

5: SRAM Check

- Using the UP and DOWN switches, select “5” and then press the STORE switch.
- If the check result is OK, all LED segments light up and go out.
- “0” and “1” at the right end represent IC2 and IC3 respectively.

6: DSP Electric Characteristic

- Using the UP and DOWN switches, select “6” and then press the STORE switch.The output level becomes the same when the right end No. is “0” and when it is “1”.
- The output level, noise level and distortion rate can be checked by inputting the signal for measurement (by shorting the input with GND for the noise level check).
- Initial setting: HIGH/LOW SW (SW101) ••• OFF (LOW), VR ••• Center, OUTPUT VR ••• MAX

ITEM	INPUT	OUTPUT
1. INPUT sensitivity	JK101(INPUT) -5dBm(1kHz)	JK103(OUT L/MONO) +1.0dBm+/-3dB
2. INPUT sensitivity	JK101(INPUT) -5dBm(10kHz)	JK103(OUT L/MONO) +1.0dBm+/-3dB
3. INPUT sensitivity	JK101(INPUT) -5dBm(100Hz)	JK103(OUT L/MONO) +1.0dBm+/-3dB
4. INPUT sensitivity	JK101(INPUT) -25dBm(100Hz)	JK104(OUT R) -1.0dBm+/-3dB
5. INPUT sensitivity	JK101(INPUT) -25dBm(10kHz)	JK104(OUT R) -1.0dBm+/-3dB
6. INPUT sensitivity	JK101(INPUT) -25dBm(1kHz)	JK104(OUT R) -1.0dBm+/-3dB
7. INPUT sensitivity	JK101(INPUT) -5dBm(1kHz)	JK102(HP L) -0.5dBm+/-3dB
8. INPUT sensitivity	JK101(INPUT) -5dBm(10kHz)	JK102(HP L) -0.5dBm+/-3dB
9. INPUT sensitivity	JK101(INPUT) -5dBm(100Hz)	JK102(HP L) -1.5dBm+/-3dB
10. INPUT sensitivity	JK101(INPUT) -25dBm(100Hz)	JK102(HP R) -3.5dBm+/-3dB
11. INPUT sensitivity	JK101(INPUT) -25dBm(10kHz)	JK102(HP R) -2.5dBm+/-3dB
12. INPUT sensitivity	JK101(INPUT) -25dBm(1kHz)	JK102(HP R) -2.5dBm+/-3dB
13. INPUT sensitivity	JK101(INPUT), SW101 ON -35dBm(1kHz)	JK104(OUT R) -0.5dBm+/-3dB
14. INPUT sensitivity	JK101(INPUT), SW101 ON -35dBm(10kHz)	JK104(OUT R) -0.5dBm+/-3dB
15. INPUT sensitivity	JK101(INPUT), SW101 ON -35dBm(100Hz)	JK104(OUT R) -0.5dBm+/-3dB
16. NOISE LEVEL	JK101(INPUT)/No Filter/GND short	JK103(OUT L/MONO) -45dBm
17. NOISE LEVEL	JK101(INPUT)/No Filter/GND short	JK104(OUT R) -45dBm
18. NOISE LEVEL	JK101(INPUT)/No Filter/GND short	JK102(HP L) -45dBm
19. NOISE LEVEL	JK101(INPUT) /No Filter/GND short	JK102(HP R) -45dBm
20. DISTORTION FACTOR	JK101(INPUT) /No Filter-5dBm(1kHz)	JK103(OUT L/MONO) 0.5%
21. DISTORTION FACTOR	JK101(INPUT)/No Filter -25dBm(1kHz)	JK104(OUT R) 0.5%
22. DISTORTION FACTOR	JK101(INPUT)/No Filter -5dBm(1kHz)	JK102(HP L) 0.5%
23. DISTORTION FACTOR	JK101(INPUT)/No Filter -25dBm(1kHz)	JK102(HP R) 0.5%
24. Digital Out	JK101(INPUT)/No Filter -15dBm(1kHz)	JK2(Digital Out) Lch -18dBm+/-3dB Rch 0dBm+/-3dB

F. HOW TO CONFRIM ROM VERSION

Turn on the power while pressing “DOWN” and “MANUAL SW” switches, and the model name appears as dG.S for about 2 seconds and then the version number as *.** also for about 2 seconds. (Each * represents a numeric figure.) Read that number for confirmation. The normal mode will then be resumed.

■ ERROR MESSAGES

If an error occurs during operation, one of the following error message numbers will appear on the display.

E1: MIDI Receive Buffer Full

CAUSE: Too much MIDI data is being received by the DG amplifier at one time.
SOLUTION: Try reducing the amount of data being sent or, break the data into smaller blocks.

E2: Communication Error.

CAUSE: An abnormality is detected during MIDI communications.
SOLUTION: Check all connections, etc. and try again.

E3: Bulk Receive Check Sum Error.

CAUSE: The check sum does not match the received MIDI bulk data.
SOLUTION: Check all connections and data, and try again.

E4: Bulk Receive Data Abnormality.

CAUSE: An abnormality is detected in the received MIDI bulk data.
SOLUTION: Check all connections and data, and try again.

E5: Backup Battery Error.

CAUSE: Backup battery power is depleted.
SOLUTION: Continued use of the device will result in the loss of data. Return the device to the music dealer where you purchased it or, have the battery replaced.

YAMAHA [Guitar Pre Amplifier with Multi Effects] Date:30-Jun-2000
Model DG stomp MIDI Implementation Chart Version : 1.0

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 - 16	1 - 16, off	memorized
	Changed	1 - 16	1 - 16, off	
Mode	Default	1,3	1,3	memorized
	Messages	x	x	
	Altered	**************	x	
Note Number		x	x	
	True voice	**************	x	
Velocity	Note ON	x	x	
	Note OFF	x	x	
After Touch	Key's	x	x	
	Ch's	x	x	
Pitch Bender		x	x	
Control Change	0	x	x	
	1 - 31	o	o	
	32 - 63	x	x	
	64 - 95	o	o	
	95 -127	x	x	
Prog Change		o 0 - 127	o 0 - 127	
	True #	**************		
System Exclusive		o	o	Bulk Dump
System common	Song Pos.	x	x	
	Song Sel.	x	x	
	Tune	x	x	
System Real Time	Clock	x	x	
	Commands	x	x	
Aux Mes- sages	All Sound OFF	x	x	
	Reset All Cntrls	x	x	
	Local ON/OFF	x	x	
	All Notes OFF	x	x	
	Active Sense	o	x	
	Reset	x	x	

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO o : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO x : No

GUITAR PRE-AMPLIFIER WITH EFFECTS

DG-Stomp

PARTS LIST

■ CONTENTS

Notes : DESTINATION ABBREVIATIONS

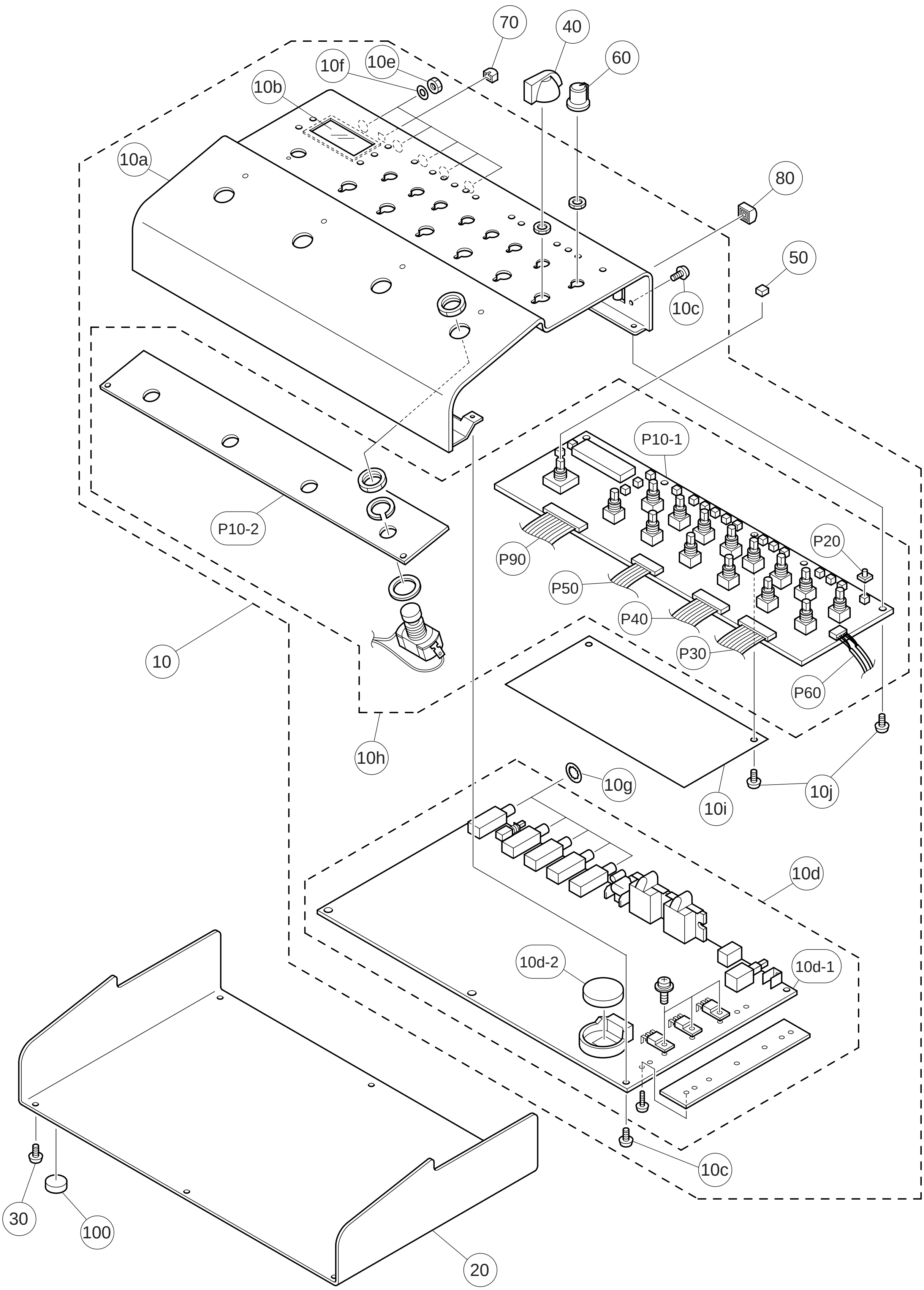
A :	Australian model	M :	South African model
B :	British model	O :	Chinese model
C :	Canadian model	Q :	South-east Asia model
D :	German model	T :	Taiwan model
E :	European model	U :	U.S.A. model
F :	French model	V :	General export model (110V)
H :	North European model	W:	General export model (220)
I :	Indonesian model	N,X :	General export model
J :	Japanese model	Y :	Export model

■ WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

- The numbers “QTY” show quantities for each unit.
- The parts with “--” in “PART NO.” are not available as spare parts.
- This mark “ } ” in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded ( ) part number is O, not zero.
- The second letter of the shaded ( ) part number is I, not one.

OVERALL ASSEMBLY



	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			OVERALL ASSEMBLY			DG-STOMP		
		--	Overall Assembly			(V573350)		
	10	--	Top Cover Assembly			(V573420)		
*	10a	V5734300	Top Cover					
*	10b	V5734500	Meter Cover					
	10c	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			7	01
	10d	--	Circuit Board Assembly			(V600780)		
*	10d-1	V5880000	Circuit Board	DG-STOMP				
	10d-2	VS246400	Lithium Battery	CR2450				03
	10e	LX200060	Hexagonal Nut	9.0 12X2 MFNI33			5	01
	10f	VL802300	Flat Washer	9X14 0.5 FNM3			5	01
	10g	ET800150	Toothed Lock Washer-A	9.0 MFZN2Y			5	01
	10h	--	Circuit Board Assembly			(V600800)		
	10i	--	Shield Film			(V585150)		
	10j	VC161100	Bind Head Tapping Screw-P	3.0X12 MFZN2BL			3	01
*	20	V5734400	Bottom Case					
	30	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			6	01
	40	V3694100	Knob (CH)	DG60-112			7	02
*	50	V5851800	Spacer					
*	60	V5852300	Knob (FX)				8	
	70	VZ429100	Button(S)	GRAY				01
	80	VZ968600	Button(L)	NO.947 CD-GRAY				01
	100	VU859300	Leg	SR200			4	01
		--	Circuit Board Assembly	PN		(V600800)		
		--	Circuit Board	(AAX19500+AAX19510)		(V587990)		
*	P10-1	AAX19500	Circuit Board					
*	P10-2	AAX19510	Circuit Board			(Foot SW Sheet)		
*	P20	V5852100	Button				17	
	P30	--	Wire Assembly	C&C #28 12P L100		(V611450)		
	P40	--	Wire Assembly	C&C #28 11P L100		(V611460)		
	P50	--	Wire Assembly	C&C #28 9P L100		(V611470)		
	P60	--	Wire Assembly	C&C #28 6P L250		(V611480)		
	P90	--	Wire Assembly	C&C #28 14P L 50		(V610850)		
			Accessories					
⚠ *		V5882800	AC Adapter	AC-10 J		J		
⚠ *		V5883000	AC Adapter	AC-10 U,C		U, C		
⚠ *		V5883100	AC Adapter	AC-10 H		H		

*: New Parts

RANK: Japan only

■ ELECTRICAL PARTS

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			ELCTRIC PARTS					
*		V5880000	Circuit Board	DM				
*		AAX19500	Circuit Board					
*		AAX19510	Circuit Board (Foot SW Sheet)					
*		V5880000	Circuit Board	DM				
		--	Heat Sink			(V573470)		
		VB763800	Bind Head Screw	SP 3.0X12 MFZN2Y			5	01
		VK863100	IC Socket	DICF-42CS-E				03
	BT1	VS246300	Battery Holder	CR2450BH				03
*	C1	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	-9	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
	C10	UR838100	Electrolytic Cap.	100.00 16.0V				01
*	C11	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	-18	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
	C19	UR838100	Electrolytic Cap.	100.00 16.0V				01
*	C20	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	-29	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
	C30	UR857100	Electrolytic Cap.	10.00 35.0V				01
*	C31	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C32	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
	C33	UR857100	Electrolytic Cap.	10.00 35.0V				01
*	C34	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C35	UX061120	Electrolytic Cap.(chip)	12P 50V J				
*	C36	UX061120	Electrolytic Cap.(chip)	12P 50V J				
	C37	UR838100	Electrolytic Cap.	100.00 16.0V				01
*	C38	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	-47	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
	C48	UR838100	Electrolytic Cap.	100.00 16.0V				01
*	C49	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	-56	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C57	UX064100	Electrolytic Cap.(chip)	0.0100 50V K				
*	C58	UX064100	Electrolytic Cap.(chip)	0.0100 50V K				
*	C59	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	-73	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C74	UX062220	Electrolytic Cap.(chip)	220P 50V J				
*	C75	UX064100	Electrolytic Cap.(chip)	0.0100 50V K				
*	C76	UX064100	Electrolytic Cap.(chip)	0.0100 50V K				
*	C77	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C78	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C79	UX064100	Electrolytic Cap.(chip)	0.0100 50V K				
*	C101	UY065220	Electrolytic Cap.(chip)	0.2200 50V Z				
*	C102	UX062100	Electrolytic Cap.(chip)	100P 50V J				
	C103	UR857100	Electrolytic Cap.	10.00 35.0V				01
*	C104	V6197100	Electrolytic Cap.-BP	10.00 35.0V				
*	C105	V6197100	Electrolytic Cap.-BP	10.00 35.0V				
*	C106	UX061100	Electrolytic Cap.(chip)	10P 50V D				
*	C107	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C108	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C109	UX061220	Electrolytic Cap.(chip)	22P 50V J				
*	C110	UX063100	Electrolytic Cap.(chip)	1000P 50V K				
*	C111	V6197100	Electrolytic Cap.-BP	10.00 35.0V				
*	C112	UX061680	Electrolytic Cap.(chip)	68P 50V J				
*	C113	UX061220	Electrolytic Cap.(chip)	22P 50V J				
*	C114	UX063100	Electrolytic Cap.(chip)	1000P 50V K				
	C115	UR857100	Electrolytic Cap.	10.00 35.0V				01
*	C116	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
	C117	UR857100	Electrolytic Cap.	10.00 35.0V				01
	-122	UR857100	Electrolytic Cap.	10.00 35.0V				01
*	C123	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C124	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
	C125	UR857100	Electrolytic Cap.	10.00 35.0V				01
	C126	UR857100	Electrolytic Cap.	10.00 35.0V				01
*	C127	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C128	UX145100	Electrolytic Cap.(chip)	0.1000 25V Z				
	C129	UR857100	Electrolytic Cap.	10.00 35.0V				01
*	C130	V6197100	Electrolytic Cap.-BP	10.00 35.0V				
*	-132	V6197100	Electrolytic Cap.-BP	10.00 35.0V				
*	C133	UX061220	Electrolytic Cap.(chip)	22P 50V J				
	C134	UR857100	Electrolytic Cap.	10.00 35.0V				01

✻: New Parts RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
*	C135	**V6197000**	Electrolytic Cap.-BP	47.00 25.0V				
*	C136	**UX063100**	Electrolytic Cap.(chip)	1000P 50V K				
*	C137	**V6197100**	Electrolytic Cap.-BP	10.00 35.0V				
*	C138	**UX061220**	Electrolytic Cap.(chip)	22P 50V J				
	C139	**UR857100**	Electrolytic Cap.	10.00 35.0V				01
*	C140	**V6197000**	Electrolytic Cap.-BP	47.00 25.0V				
*	C141	**UX063100**	Electrolytic Cap.(chip)	1000P 50V K				
*	C142	**UX061220**	Electrolytic Cap.(chip)	22P 50V J				
	C143	**UR857100**	Electrolytic Cap.	10.00 35.0V				01
*	C144	**V6197100**	Electrolytic Cap.-BP	10.00 35.0V				
*	C145	**UX062100**	Electrolytic Cap.(chip)	100P 50V J				
*	C146	**UX061220**	Electrolytic Cap.(chip)	22P 50V J				
	C147	**UR857100**	Electrolytic Cap.	10.00 35.0V				01
*	C148	**V6197100**	Electrolytic Cap.-BP	10.00 35.0V				
*	C149	**UX062100**	Electrolytic Cap.(chip)	100P 50V J				
	C150	**UR848100**	Electrolytic Cap.	100.00 25.0V				01
	C151	**UR848100**	Electrolytic Cap.	100.00 25.0V				01
	C152	**UR857100**	Electrolytic Cap.	10.00 35.0V				01
	C153	**UR857100**	Electrolytic Cap.	10.00 35.0V				01
	C154	**UR866100**	Electrolytic Cap.	1.00 50.0V				01
	C155	**UR866470**	Electrolytic Cap.	4.70 50.0V				01
	C156	**UR848100**	Electrolytic Cap.	100.00 25.0V				01
*	C157	**UX145100**	Electrolytic Cap.(chip)	0.1000 25V Z				
*	C158	**UX145100**	Electrolytic Cap.(chip)	0.1000 25V Z				
	C159	**UR848100**	Electrolytic Cap.	100.00 25.0V				01
*	C161	**UY065100**	Electrolytic Cap.(chip)	0.1000 50V Z				
*	-163	**UY065100**	Electrolytic Cap.(chip)	0.1000 50V Z				
*	C164	**V6196900**	Electrolytic Cap.	3300 35.0V				
*	C166	**UY065100**	Electrolytic Cap.(chip)	0.1000 50V Z				
*	C167	**UX145100**	Electrolytic Cap.(chip)	0.1000 25V Z				
	C168	**UR838100**	Electrolytic Cap.	100.00 16.0V				01
	C169	**UR839100**	Electrolytic Cap.	1000 16.0V				01
	C170	**UR839100**	Electrolytic Cap.	1000 16.0V				01
	C171	**UR858470**	Electrolytic Cap.	470.00 35.0V				01
	-174	**UR868470**	Electrolytic Cap.	470.00 50.0V				01
*	C175	**UY065100**	Electrolytic Cap.(chip)	0.1000 50V Z				
*	-178	**UX145100**	Electrolytic Cap.(chip)	0.1000 25V Z				
	C179	**UR848100**	Electrolytic Cap.	100.00 25.0V				01
	C180	**UR848100**	Electrolytic Cap.	100.00 25.0V				01
	C181	**UR848220**	Electrolytic Cap.	220.00 25.0V				01
	C182	**UR848220**	Electrolytic Cap.	220.00 25.0V				01
*	C191	**UX060500**	Electrolytic Cap.(chip)	5P 50V C				
*	C192	**UX060500**	Electrolytic Cap.(chip)	5P 50V C				
*	C193	**UX145100**	Electrolytic Cap.(chip)	0.1000 25V Z				
*	-196	**UX145100**	Electrolytic Cap.(chip)	0.1000 25V Z				
	C198	**UR866100**	Electrolytic Cap.	1.00 50.0V				01
	C199	**UR866100**	Electrolytic Cap.	1.00 50.0V				01
	CN1	**VV067200**	Connector Base Post	M2426XX 12P TE				01
	CN2	**VV067100**	Connector Base Post	M2426XX 11P TE				01
	CN3	**VV066900**	Connector Base Post	M2426XX 9P TE				01
	CN103	**VV066600**	Connector Base Post	M2426XX 6P TE				01
	D1	**VT332900**	Diode	1SS355 TE-17				01
	D101	**VT332900**	Diode	1SS355 TE-17				01
	-104	**VT332900**	Diode	1SS355 TE-17				01
	D105	**VT532500**	Diode	1SR154-400				01
	D106	**VT332900**	Diode	1SS355 TE-17				01
	D107	**VT532500**	Diode	1SR154-400				01
	-115	**VT532500**	Diode	1SR154-400				01
*	IC1	**XZ198B00**	IC	MSM27C802CZ-NRS		8M		
	IC2	**XV411A00**	IC	W24258S-70LE-EL10		256K		07
	IC2	**XW433A00**	IC	CY62256LL-70SNCT		256K		05
	IC3	**XV411A00**	IC	W24258S-70LE-EL10		256K		07
	IC3	**XW433A00**	IC	CY62256LL-70SNCT		256K		05
	IC4	**XR967A00**	IC	MB3790PF ASSP		ASSP		05
*	IC5	**XZ103A00**	IC	74AHC32DT		OR		
*	IC6	**XZ103A00**	IC	74AHC32DT		OR		
*	IC7	**XZ108A00**	IC	74HC08DT		AND		
	IC8	**XV988A00**	IC	YSS910-S		DSP6		10
	IC9	**XV988A00**	IC	YSS910-S		DSP6		10
	IC10	**XV077A00**	IC	MSM514260C-60JS		4M		07

✻: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	IC10	**XV839A00**	IC	SDM4260CLU-6S		4M		08
	IC11	**XV077A00**	IC	MSM514260C-60JS		4M		07
	IC11	**XV839A00**	IC	SDM4260CLU-6S		4M		08
	IC12	**XQ375A00**	IC	HD6413002FP16		CPU	9	
	IC13	**VN686000**	Photo Coupler	PC410T				04
	IC13	**VR903700**	Photo Coupler	HCPL-M600				04
*	IC14	**XZ109A00**	IC	74HC244DT		BUS BUFFER		
*	IC15	**XZ109A00**	IC	74HC244DT		BUS BUFFER		
*	IC16	**XZ109A00**	IC	74HC244DT		BUS BUFFER		
	IC17	**XM530A00**	IC	YM3437C-F		DIT2		07
	IC18	**XU965A00**	IC	UPC29M33T-E1		3.3V REGULATOR		03
	IC101	**XC458A00**	IC	NJM072M		OP AMP		03
	IC102	**XC011A00**	IC	NJM5532M		OP AMP		03
	IC103	**XC011A00**	IC	NJM5532M		OP AMP		03
	IC104	**XT802A00**	IC	AK4520A-VF-E2		ADC&DAC		07
	IC105	**XQ138A00**	IC	NJM4556AMT1		OP AMP		03
	IC106	**XC011A00**	IC	NJM5532M		OP AMP		03
*	IC107	**XZ110A00**	IC	74HCU04DT		INVERTER		
	IC108	**XR684A00**	IC	TC74HC4040F		B. COUNTER		03
*	IC109	**XZ112A00**	IC	74HC164DT		SHIFT REGISTANT		
*	IC110	**XZ113A00**	IC	74HC175DT		D-FF		
*	IC111	**XZ162A00**	IC	NJM78M05DLA		5V REGULATOR		
	IC112	**XJ607A00**	IC	NJM7805FA		5V REGULATOR		02
	IC113	**XD853A00**	IC	NJM7815FA		REGULATOR		03
	IC114	**XD854A00**	IC	NJM7915FA		REGULATOR		03
*	JK1	**V6177500**	DIN Connector	5P3 HDC-052A				
*	JK2	**V6178000**	Pin Connector	HSP-241V1B				
*	JK3	**V6177700**	Phone Jack	HTJ-064-12D				
*	JK101	**V3633400**	Phone Jack	HTJ-064-12I				
*	JK102	**V6177700**	Phone Jack	HTJ-064-12D				
*	JK103	**V3633400**	Phone Jack	HTJ-064-12I				
*	JK104	**V3633400**	Phone Jack	HTJ-064-12I				
*	JK105	**V6177200**	Connector	HTJ-020-05A				
	J1	--	Jumper Wire	0.55		(VA07890)		
	-3	--	Jumper Wire	0.55		(VA07890)		
	J101	--	Jumper Wire	0.55		(VA07890)		
	-108	--	Jumper Wire	0.55		(VA07890)		
	K1	**VB966900**	Style Pin	IMSA-6024				01
	K101	**VV075700**	Terminal Plate					01
	L1	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	-6	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	L7	**VC548200**	Pulse Transformer	TC-1019-06 7MM				04
*	L8	**V6178900**	Noise Filter	ZJYS51R5-2PT				
	L101	**VG238200**	LC Filter	PLT2003C				04
*	RA1	**RH047100**	Resistor Array	10KX4				
*	-18	**RH047100**	Resistor Array	10KX4				
*	R1	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R2	**RG005100**	Carbon Resistor (chip)	100 0.1 J				
*	-8	**RG005100**	Carbon Resistor (chip)	100 0.1 J				
*	R9	**RG005270**	Carbon Resistor (chip)	270 0.1 J				
*	R10	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R11	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R12	**RG006100**	Carbon Resistor (chip)	1.0K 0.1 J				
*	R13	**RG005220**	Carbon Resistor (chip)	220 0.1 J				
*	R14	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	-16	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R17	**RG006220**	Carbon Resistor (chip)	2.2K 0.1 J				
*	R18	**RG005220**	Carbon Resistor (chip)	220 0.1 J				
*	R19	**RG005220**	Carbon Resistor (chip)	220 0.1 J				
*	R20	**RG006100**	Carbon Resistor (chip)	1.0K 0.1 J				
*	R21	**RG006100**	Carbon Resistor (chip)	1.0K 0.1 J				
*	R22	**RG009100**	Carbon Resistor (chip)	1.0M 0.1 J				
*	R23	**RG004470**	Carbon Resistor (chip)	47 0.1 J				
*	R24	**RG004750**	Carbon Resistor (chip)	75 0.1 J				
*	R26	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R27	**RG000000**	Carbon Resistor (chip)	0 0.1 J				
*	R101	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R102	**RG009100**	Carbon Resistor (chip)	1.0M 0.1 J				
*	R103	**RG006470**	Carbon Resistor (chip)	4.7K 0.1 J				
*	R104	**RG006470**	Carbon Resistor (chip)	4.7K 0.1 J				

✻: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
*	R105	RG007220	Carbon Resistor (chip)	22K 0.1 J				
*	R106	RG007120	Carbon Resistor (chip)	12K 0.1 J				
*	R108	RG107100	Carbon Resistor (chip)	10K 0.1 F				
*	R109	RG107220	Carbon Resistor (chip)	22K 0.1 F				
*	R110	RG106330	Carbon Resistor (chip)	3.3K 0.1 F				
*	R111	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R112	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R113	RG006560	Carbon Resistor (chip)	5.6K 0.1 J				
*	R114	RG006560	Carbon Resistor (chip)	5.6K 0.1 J				
*	R115	RG005470	Carbon Resistor (chip)	470 0.1 J				
*	R116	RG005470	Carbon Resistor (chip)	470 0.1 J				
*	R117	RG107100	Carbon Resistor (chip)	10K 0.1 F				
*	R118	RG105470	Carbon Resistor (chip)	470 0.1 F				
*	R119	RG106270	Carbon Resistor (chip)	2.7K 0.1 F				
*	R120	RG006560	Carbon Resistor (chip)	5.6K 0.1 J				
*	R121	RG006560	Carbon Resistor (chip)	5.6K 0.1 J				
*	R122	RG005470	Carbon Resistor (chip)	470 0.1 J				
*	R123	RG005470	Carbon Resistor (chip)	470 0.1 J				
*	R124	RG006470	Carbon Resistor (chip)	4.7K 0.1 J				
*	R125	RG004330	Carbon Resistor (chip)	33 0.1 J				
*	R126	RG006470	Carbon Resistor (chip)	4.7K 0.1 J				
*	R127	RG203470	Carbon Resistor (chip)	4.7 1/4 J				
*	R128	RG006100	Carbon Resistor (chip)	1.0K 0.1 J				
*	R129	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R130	RG006100	Carbon Resistor (chip)	1.0K 0.1 J				
*	R131	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R132	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R133	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R134	RG006100	Carbon Resistor (chip)	1.0K 0.1 J				
*	R135	RG204470	Carbon Resistor (chip)	47 1/4 J				
*	R136	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R137	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R138	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R139	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R140	RG006100	Carbon Resistor (chip)	1.0K 0.1 J				
*	R141	RG204470	Carbon Resistor (chip)	47 1/4 J				
*	R142	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R143	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R144	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R145	RG006220	Carbon Resistor (chip)	2.2K 0.1 J				
*	R146	RG006100	Carbon Resistor (chip)	1.0K 0.1 J				
*	R147	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R148	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R149	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R150	RG006220	Carbon Resistor (chip)	2.2K 0.1 J				
*	R151	RG006100	Carbon Resistor (chip)	1.0K 0.1 J				
*	R152	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R153	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R154	RG007100	Carbon Resistor (chip)	10K 0.1 J				
*	R155	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R156	RG007220	Carbon Resistor (chip)	22K 0.1 J				
*	R157	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R158	RG006220	Carbon Resistor (chip)	2.2K 0.1 J				
*	R159	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R160	RG008100	Carbon Resistor (chip)	100K 0.1 J				
*	R161	RG006470	Carbon Resistor (chip)	4.7K 0.1 J				
*	R162	RG006470	Carbon Resistor (chip)	4.7K 0.1 J				
*	R163	RG009100	Carbon Resistor (chip)	1.0M 0.1 J				
*	R164	RG005680	Carbon Resistor (chip)	680 0.1 J				
*	R165	RG005220	Carbon Resistor (chip)	220 0.1 J				
*	R166	RG205100	Carbon Resistor (chip)	100 1/4 J				
*	R167	RG205100	Carbon Resistor (chip)	100 1/4 J				
	SW101	V3633600	Push Switch	SPPJ22SE01				02
*	SW102	V4577800	Push Switch	SDKLA10200				
	TR1	VV556400	Transistor	2SC2412K Q,R,S				01
	TR2	VV556400	Transistor	2SC2412K Q,R,S				01
	TR101	VD303700	Transistor	2SC3326 A,B TE85R				01
	-106	VD303700	Transistor	2SC3326 A,B TE85R				01
	TR107	VV556400	Transistor	2SC2412K Q,R,S				01
	TR108	VJ927200	Transistor	2SA1162 O,Y				01

✻: New Parts

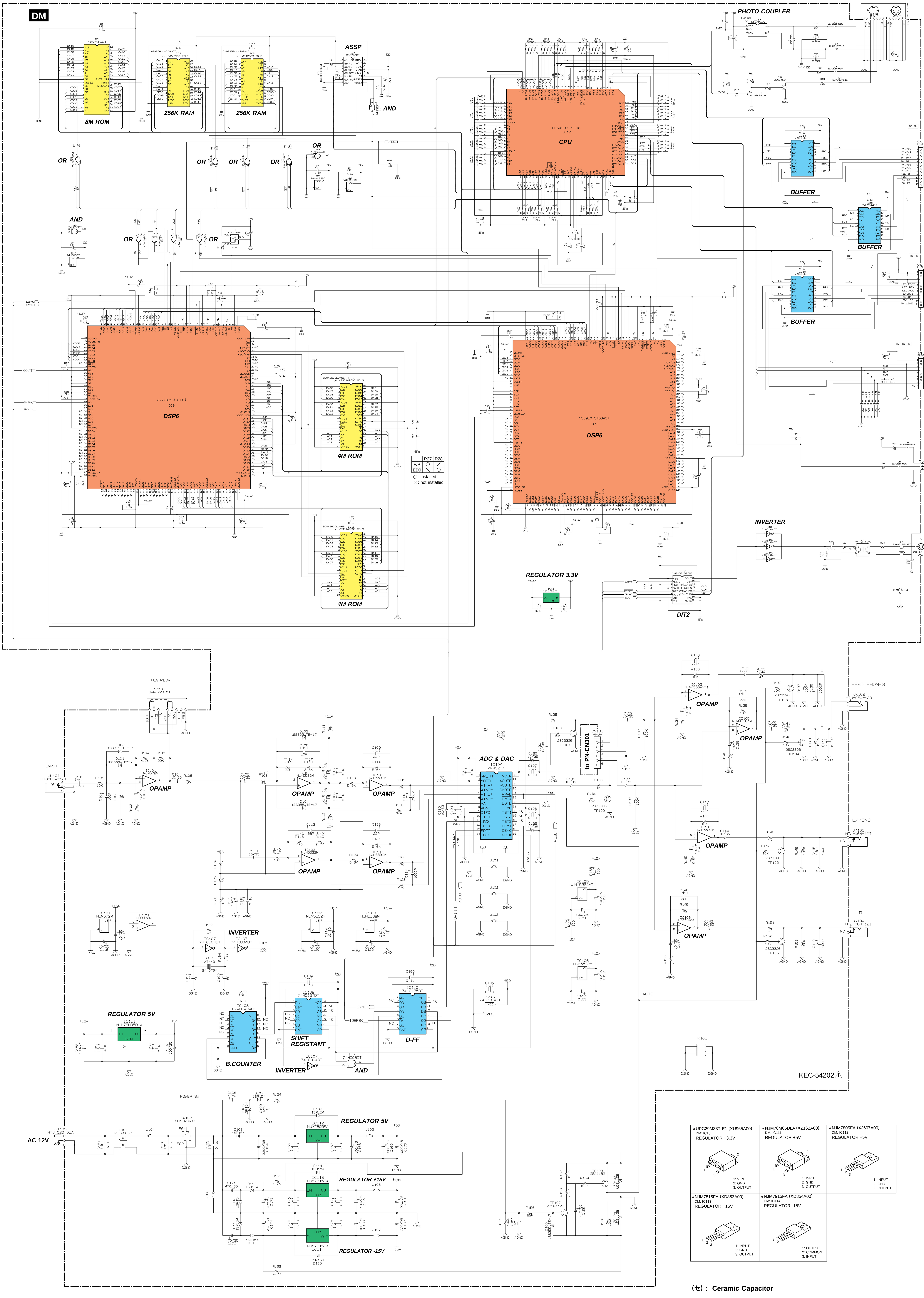
RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	X1	**VU682100**	Quartz Crystal Unit	30.00M HZ DOC-49S2				06
	X2	**VE463500**	Quartz Crystal Unit	AT-49/12.0000MHZ				03
	X101	**VN277000**	Quartz Crystal Unit	24.576M AF3817CQA				03
*	ZD101	**VU170900**	Zener Diode	UDZ 2.0BTE-17 2.0V				
*	ZD102	**VU170900**	Zener Diode	UDZ 2.0BTE-17 2.0V				
*	ZD103	**VU173000**	Zener Diode	UDZ 15B TE-17 15V				
*	ZD104	**VU173000**	Zener Diode	UDZ 15B TE-17 15V				
		--	Circuit Board	PN		(V587990)		
*		**V6220800**	Spacer				8	
*		**V6624600**	LED Holder	LED3-1A			4	
		--	Wire Assembly	C& #24 2P L60		(V654510)	4	
*		**V6124500**	Push Switch	ADS-003-A10			4	
*	C301	**UX145100**	Electrolytic Cap.(chip)	0.1000 25V Z				
*	-315	**UX145100**	Electrolytic Cap.(chip)	0.1000 25V Z				
	CN301	**VV068000**	Connector Base Post	M2426XXR 6P SE				01
	CN302	**VV068300**	Connector Base Post	M2426XXR 9P SE				01
*	CN303	**VV068500**	Connector Base Post	M2426XXR 11P SE				
	CN304	**VV068600**	Connector Base Post	M2426XXR 12P SE				01
	CN305	**VV068800**	Connector Base Post	M2426XXR 14P SE				01
*	CN306	**VV067400**	Connector Base Post	M2426XX 14P TE				
	CN307	**VV066200**	Connector Base Post	M2426XX 2P TE				01
	CN308	**VV066200**	Connector Base Post	M2426XX 2P TE				01
	-310	**VV066200**	Connector Base Post	M2426XX 2P TE				01
	D301	**VT332900**	Diode	1SS355 TE-17				01
	-321	**VT332900**	Diode	1SS355 TE-17				01
*	IC301	**XZ102A00**	IC	74HC374DT		D-FF		
*	-307	**XZ102A00**	IC	74HC374DT		D-FF		
*	IC308	**XZ101A00**	IC	74HC4052DT		MULTIPLEXER		
*	IC309	**XZ101A00**	IC	74HC4052DT		MULTIPLEXER		
	K301	**VB966900**	Style Pin	IMSA-6024				01
*	LD301	**V5801000**	LED Display	LTC-5836E				
	LD302	**VV620800**	LED Red	LT311G-41-C13				01
	-304	**VV620800**	LED Red	LT311G-41-C13				01
	LD306	**VV620800**	LED Red	LT311G-41-C13				01
	L301	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	-312	**VS740100**	Chip Inductance	BLM21B751S 2125				03
*	R301	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	-304	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R305	**RG005560**	Carbon Resistor (chip)	560 0.1 J				
*	-321	**RG005560**	Carbon Resistor (chip)	560 0.1 J				
*	R322	**RG005820**	Carbon Resistor (chip)	820 0.1 J				
*	-345	**RG005820**	Carbon Resistor (chip)	820 0.1 J				
*	R346	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	-360	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R361	**RG006100**	Carbon Resistor (chip)	1.0K 0.1 J				
*	-367	**RG006100**	Carbon Resistor (chip)	1.0K 0.1 J				
*	R368	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R369	**RG007100**	Carbon Resistor (chip)	10K 0.1 J				
*	R370	**RG005560**	Carbon Resistor (chip)	560 0.1 J				
*	-374	**RG005560**	Carbon Resistor (chip)	560 0.1 J				
*	R376	**RG000000**	Carbon Resistor (chip)	0 0.1 J				
	SW301	**VK701100**	Push Switch	SKHQFN GREEN				02
	-317	**VK701100**	Push Switch	SKHQFN GREEN				02
	SW318	**V3633800**	Rotary Switch	SRBV18 1C-8S				07
*	VR301	**V5264800**	Rotary Variable Resistor	RK09L1140 10KB				
*	-313	**V5264800**	Rotary Variable Resistor	RK09L1140 10KB				
*	VR314	**V5265100**	Rotary Variable Resistor	RK09L12D0 20KA X2				

*: New Parts

RANK: Japan only

■DG-Stomp OVERALL CIRCUIT DIAGRAM 1/2 (DM)



(セ) : Ceramic Capacitor

Note : See parts list for details of circuit board component parts.

■DG-Stomp OVERALL CIRCUIT DIAGRAM 2/2 (PN 1/2, PN 2/2)

